Canvas 2.0™

Desk Accessory User Guide

Canvas 2.0 DA

User Guide

Warranty

All implied warranties concerning this manual and media, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to a period of (90) ninety days from the date of original retail purchase of this product.

Neither Deneba nor its software suppliers make any warranty or representation, either express or implied with respect to the software described in this manual, its quality, performance, merchantability, or fitness for any particular purpose. As a result, this software is sold "as is:" the purchaser assumes the entire risk as to its quality and performance.

In no event will Deneba or its software suppliers be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect in the software or manual, even if they have been advised of the possibility of such damages. In par they shall have no liability for any programs or data stored in or used with Deneba products, including the costs of recovering or reproducing these programs or data.

The warranty and remedies set forth above are exclusive and in lieu of all others, oral or written, express or implied. No Deneba dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Copyright

This manual and the software (computer program) described in it are copyright ©Deneba Systems, Inc. with all rights reserved worldwide. Under the copyright laws, this manual and the software program contained herein may not be copied, in whole or in part, without prior written consent of Deneba, except in the normal use of the software or to make a backup copy. This exception does not allow copies to be made for others, whether or not sold, but all of the material purchased (with all backup copies) may be sold, given or loaned to another person. Under the law, copying includes translating into another language or format.

A multi-use license may be purchased to allow the software to be used on more than one computer owned by the purchaser, including a shared disk system.

Deneba Systems, Inc. hereby agrees to grant you a non-exclusive license to use the enclosed software program, subject to the terms and conditions set forth in this License Agreement.

Manual written by Douglas D. Levy
Edited by Maria Abreu

Text retains its identity in draw programs and can always be recalled and edited from the keyboard. By contrast, once text is incorporated into a paint program it becomes part a bitmap and can be altered only with paint tools; i.e. you can no longer change a word simply by typing. And letters never print smoother than what you see on screen. In a draw program, however, letters are sent to a LaserWriter as outlines mathematically described by PostScript™, to be scaled, and filled in, at the full resolution of the printer. Even on an ImageWriter, text in a draw program will automatically access the double–size font bitmaps necessary for "Best" printout, just as when printing from a word processing application. Canvas never forces you to store text as a bitmap, although it allows you to do so if you wish.

The Canvas 2.0 DA™ and Microsoft Products

This FREE copy of the Canvas 2.0 DA™ graphics desk accessory has been brought to you courtesy of Deneba Software and Microsoft Corp. Even though the Canvas 2.0 DA is a very powerful desk accessory, it only offers a fraction of the features found in the Canvas 2.0 stand-alone application. To help you decide whether you should upgrade to the full application, a feature listing can be found in Appendix A.

Before you begin working with the Canvas 2.0 DA, please continue to read the **Introduction** to learn:

- **What your Canvas 2.0 DA package includes**
- **How to use this manual to get the most from your Canvas desk accessory**
- **How to install the Canvas 2.0 DA**

What's Included In The Canvas 2.0 DA Package

Here's what the Canvas 2.0 DA package includes:

- **Canvas 2.0 Desk Accessory disk**
- **Canvas 2.0 DA User Manual**
- **Owner's Registration Card and Upgrade Certificate**

If your package is missing any of the above, contact Microsoft Corporation at (206) 882-8088.

Registration

Deneba Software provides technical support to all registered users of Canvas DA. In order to take advantage of this service, you must complete the enclosed registration card. Additionally, as a registered user, you will receive a complimentary copy of the quarterly Deneba News; a newsletter highlighting product tips and techniques, new product announcements and upgrade notices. But we need to know who you are! Take a minute right now and complete your registration card.

If you need assistance on how to use the Canvas 2.0 DA with your Microsoft product, first contact Microsoft Technical Support at the number found in your Microsoft package. If they instruct you to do so or if your question pertains directly to an internal function of the Canvas 2.0 DA please call Deneba's Customer Support Hot-Line at (305) 594-6965 Monday thru Friday between

9:00am and 5:00pm Eastern Standard Time. Please have your Canvas 2.0 DA manual and serial number handy before you call.

System Requirements

To use Canvas 2.0 DA, the minimum equipment that you will need is:

- Macintosh Plus with 1MB of RAM, 2MB is recommended
- Two 800K floppy disk drives or a hard disk
- Apple System 6.02 or higher

If you own, or have access to, a PostScript© laser printer, such as Apple's LaserWriter™, LaserWriter Plus™, LaserWriter NT™, or LaserWriter NTX™ you will find that Canvas 2.0 DA takes full advantage of your printer's capabilities for more power and versatility. Canvas can generate very high quality output using an Apple ImageWriter™ or compatible printer. Compatibles include laser printers like the Apple LaserWriter SC™ or the Hewlett-Packard LaserJet™, which do not use the PostScript© page description language.

Memory and MultiFinder

The Canvas 2.0 DA is a large desk accessory. Due to its size and its sophistication it may not allow you to work on more complex illustrations when used from within very large applications if you have less than 2MB of memory. Since MultiFinder is optimized to work with stand-alone programs, you will get better performance in many situations from the Canvas 2.0 program than from the desk accessory version.

Installation Procedures

Before you begin, your license agreement permits you to make one working copy of the Desk Accessory Disk. Once you have done this, store your Master Disk in a safe place.

If you need help making a backup copy, refer to your Macintosh *User's Guide* for instructions.

Hard Drive Installation

Since Canvas 2.0 DA is a desk accessory, you will need to install it in the Active System of your hard drive. Use the Font/DA Mover program included on the Canvas DA disk; this is the latest version.

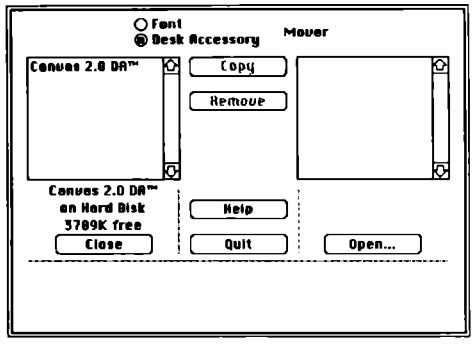
1. **Turn on your Macintosh as you normally would and insert the *working copy* of your Canvas 2.0 DA disk.** If you are using a version of the system prior to the 6.0 release, contact you local Macintosh dealer or User Group for a copy of the latest System release.

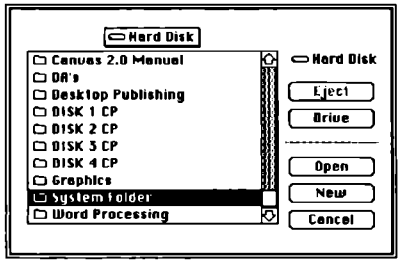
2. **Drag the Canvas 2.0 DA suitcase, Canvas Prefs, Font/DA Mover and Sample Files folder to your hard drive.** The message "Files/Folders remaining to be copied:..." will appear while the files are being copied.

USER TIP *IF YOU ALREADY HAVE THE MOST RECENT VERSION OF THE FONT/DA MOVER ON YOUR HARD DRIVE, THERE IS NO REASON TO COPY IT FROM THE CANVAS 2.0 DA DISK.*

3. **Move the *Canvas Prefs* file into your *Active System* folder.**

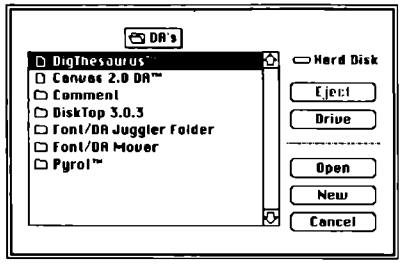
4. **Double-click on the *Canvas 2.0 DA* suitcase icon on your hard drive.** The Font/DA Mover window will appear with *Canvas 2.0 DA* listed in the left scroll box.





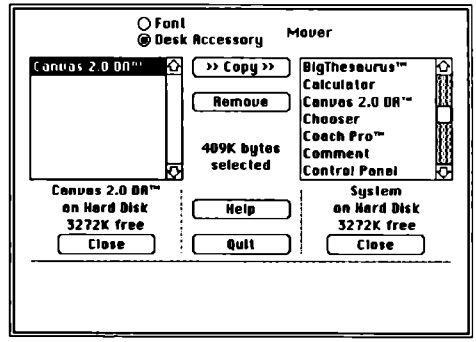
5. **Click on the *Open* button below the right scroll box.** The standard file selection dialog box appears showing the contents of your hard drive,

6. **Double-click on the *Active System* folder to open it, or click on it once to highlight it, then, click the *Open* button.** The files in the *System* folder will appear in the window. If necessary, scroll until you see the *Active System file.*



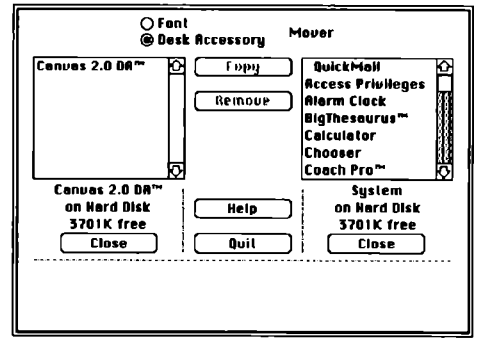
7. **Double-click on the *Active System file* or click once to highlight it, then, click on the *Open* button.** The desk accessories installed in the *System file* will appear in the right scroll box of the Font/DA Mover.

8. **Click on *Canvas 2.0 DA* to highlight it, then, click on the *Copy* button to install it in your *Active System file.***



USER TIP *IF YOU RECEIVE THE MESSAGE "YOU HAVE MORE THAN 14 DESK ACCESSORIES INSTALLED," YOU WILL NEED TO DELETE ONE OF THE DESK ACCESSORIES BEFORE YOU CAN INSTALL CANVAS 2.0 DA.*

When the wrist watch icon disappears, Canvas 2.0 DA should appear in the right scroll box. It is now installed with your other desk accessories.



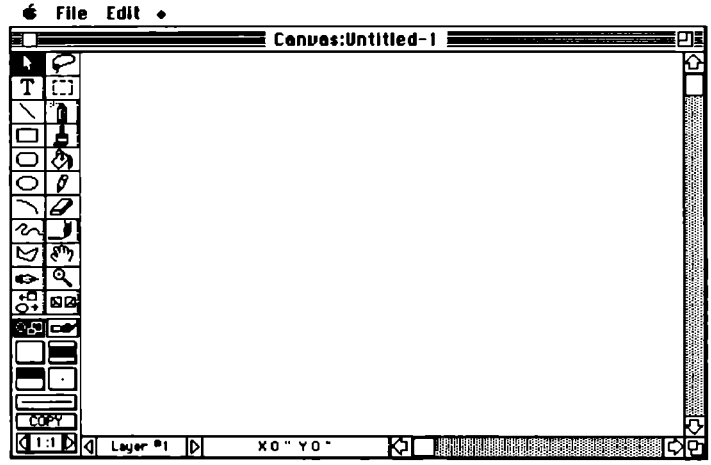
9. Click the *Quit button and you will return to the desktop.*

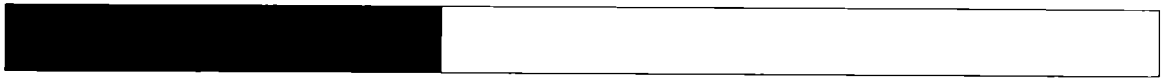
To open the Canvas DA, select it from the Apple menu. A personalization screen will appear requesting your name and organization.

- **Under Name, enter at least three characters (no initials, please). Press the Tab key.**

- **Under Organization, enter at least three characters. Press Return.**

The Canvas program startup screen appears, followed by the program's desktop (known as the Canvas Window). You are now ready to begin working with the Canvas 2.0 DA.

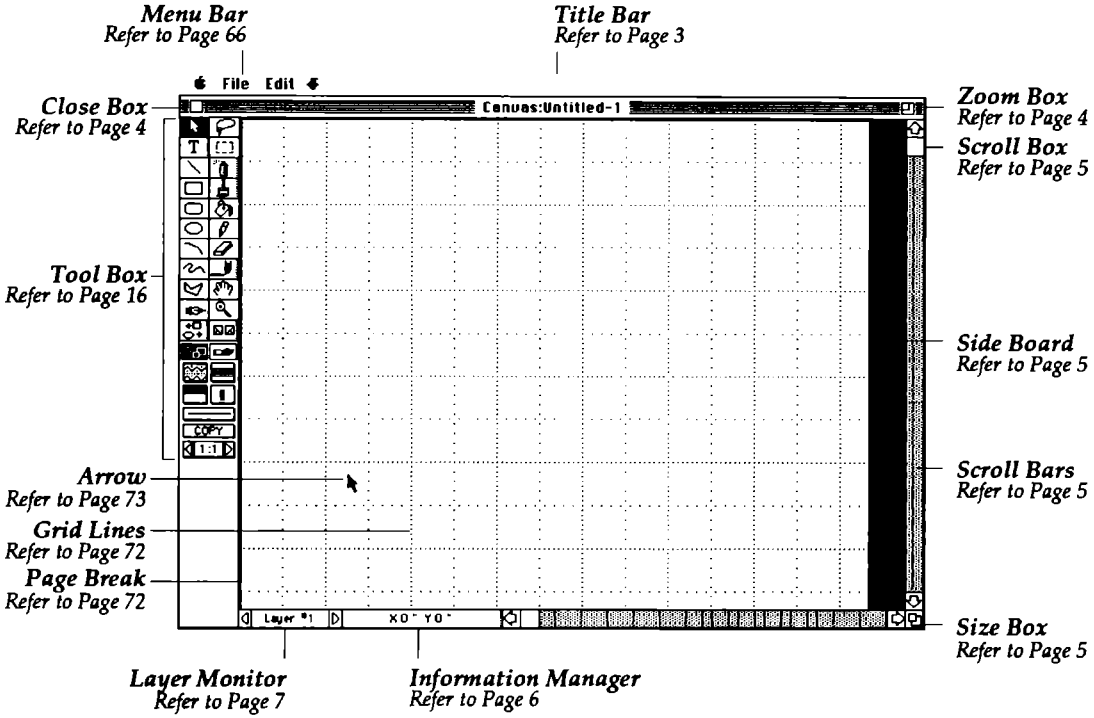




2 ***About the Canvas DA Window***
3 *The Canvas Menu Bar*
3 *Title Bar*
4 *Close Box*
4 *Zoom Box*
5 *Size Box*
5 *Scroll Bars*
5 *Sideboard*
6 *Information Manager*
7 *Layer Monitor*
8 *Tool Box*
8 ***Canvas Prefs File***
10 ***Stationery Pad Files***
10 ***Arrow Keys***
11 ***Command Keys***
12 ***Multiplex Keys***
13 ***Canvas Rescue Files***
16 ***About the Tool Box***
17 ***The Selection Tools***
17 *Arrow Tool*
19 *Lasso Tool*
20 *Marquee Tool*
22 ***The Text Tool***
23 ***The Basic Draw Tools***
23 *Line Tool*
24 *Rectangle Tool*
25 *Rounded-Corner Rectangle Tool*
25 *Oval Tool*
27 *Arc Tool*
28 ***The Advanced Draw Tools***
28 *Freeform Tool*
29 *Polygon Tool*
29 *Bezier Curve Tool*
31 *Modifying Freeform And Polygon Shapes*
39 *Modifying Bezier Curves*
45 *Add'l Options For Advanced Draw Objects*
46 ***The Paint Tools***
46 *Spray Can Tool*
47 *Paint Brush Tool*
47 *Paint Bucket Tool*
48 *Pencil Tool*
48 *Eraser Tool*
49 *Bitmap Editor Tool*
50 ***The Effects Tools***
50 *Hand Tool*
50 *Magnifying Glass Tool*
51 *Alignment Tool*
52 *Special Effects Tool*
53 ***The Mode Selectors***
54 ***The Palette Managers***
54 *Fill Pattern Manager*
55 *Pen Pattern Manager*
55 *Foreground &Background Color Managers*
56 *Pen Shape Manager*
56 *Arrow Manager*
56 *Ink Manager*
57 *Zoom Manager*
59 ***The File Menu***
59 *Close*
59 *Quit*
60 ***The Edit Menu***
60 *Undo*
61 *Cut*
62 *Copy*
62 *Paste*
63 *Clear*
64 ***The Canvas DA Menu***
64 *New*
64 *Open*
65 *Save As*
66 *Bring to Front*
66 *Send to Back*
66 *Group*
67 *Ungroup*
67 *Edit Polygon*
68 *Smooth Polygon*
69 *Type*
70 *Page Setup*
70 *Print*
71 *Preferences*
74 *Options*
74 *Quit*
76 ***Index***
A1 ***Appendix A***
B1 ***Appendix B***

About the Canvas DA Window

The *Canvas DA Window* is your electronic illustration board and drafting table combined into a unique and feature-laden window. It contains the drawing area where you will create your illustration with all of the necessary tools and commands at you fingertips.



This section describes the features of the *Canvas DA Window*. Specific information about the individual ***Tool Box*** and ***Menu Bar*** commands and options are discussed in later sections.

When you start Canvas, the *Canvas DA Window* is displayed. It is like any other standard Macintosh window: it can be moved, re-sized, zoomed, closed and scrolled. You can open any number of windows, up to the memory capacity of your computer.

All drawing and painting takes place within the illustration area, the electronic grid. When you first open Canvas, the document is set to be 8 inches by 10 inches. However, your illustration can be much larger than your Macintosh screen - up to 9 feet by 9 feet. Canvas allows you to quickly move around your illustration with different views, while simultaneously providing magnification levels to define details and reduction levels to preview the entire document.

The Canvas Menu Bar

Stretching across the top of your screen is the *Canvas DA Menu Bar*. The standard Macintosh and special Canvas pull-down menus are located here and are discussed in detail beginning on page 65.

Title Bar

The *Title Bar* is located under the *Canvas Menu Bar*. It displays the *type of document* you are working on, followed by the *name of the document*.

Canvas can open documents which have been saved in the following formats:

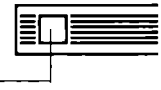
- Canvas
- Stationery Pad (*Canvas Prefs*)
- MacPaint
- PICT, or PICT2
- TIFF

Therefore, anytime you are working on an illustration that was originally saved by another program, you need only refer to the ***Title Bar*** to reference the type of document you are working with. Following the *file type* is the *name of your document*. A new illustration is automatically named *"Untitled 1"*. After you name and save an illustration, it's name will appear in place of *"Untitled 1"*. Canvas puts the *"1"* after *"Untitled"* since you can open multiple new documents up to the memory capacity of your computer. It will automatically name any additional new illustrations *"Untitled 2"*, *"Untitled 3"*, etc.

As with any standard Macintosh window, the *Canvas DA Window* contains the *Close, Zoom,* and *Size Boxes,* and the *Scroll Bars* and *Scroll Box.*

Close Box

The ***Close Box*** is located in the left corner of the ***Title Bar.*** If you click the mouse in the ***Close Box,*** you will put away (*close*) the illustration in the *Canvas DA Window.* However, before closing the document, if you have not saved your illustration on disk, Canvas will ask you if you want to save it. (*Refer to page 73 for information on* ***Saving.***)

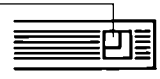


Close Box

Zoom Box

The ***Zoom Box*** will change the dimensions of the *Canvas DA Window.* To use the ***Zoom Box,*** located in the right corner of the ***Title Bar,*** simply click the mouse in its box to quickly enlarge the illustration to the maximum size available for your particular screen; click again to return the *Canvas DA Window* to its original size.

Zoom Box

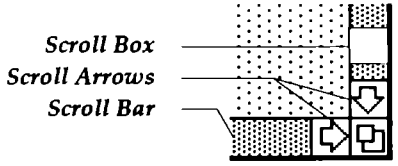


Size Box

Located in the lower right corner of the *Canvas DA Window*, the ***Size Box*** will change the size of the window by dragging the mouse. Drag the ***Size Box*** to change the size of the *Canvas DA Window* to any size that fits your screen.

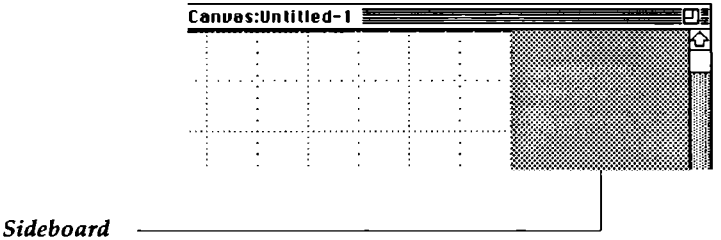
Scroll Bars

The ***Scroll Bars, Boxes*** and ***Arrows*** are along both the right side and bottom of the *Canvas DA Window*. Use them for vertical and horizontal movement around your illustration. You can use the ***Scroll Arrows*** to scroll continuously, click within the ***Scroll Bars*** to move by the windowful or drag the ***Scroll Boxes*** to immediately move to an approximate location in your illustration.



Sideboard

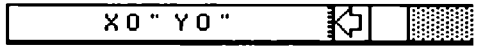
The *Canvas DA Window* contains a gray shaded area surrounding the right and bottom sides of the drawing area called the ***Sideboard.*** This is your *"work bench."* You can move objects out of the *Canvas DA Window* and place them on the ***Sideboard*** until you need them.



You can also create objects in the ***Sideboard*** first, and then move them into your illustration. Objects in the ***Sideboard*** are saved with the document, but are not printed. The ***Sideboard*** is always larger than the drawing size specified by the ***Drawing Size*** option in the ***Preferences*** command of the ***Canvas 2.0 DA Menu.***

Information Manager

The ***Information Manager*** is located on the left side of the *Horizontal Scroll Bar,* when the ***Show Info Manager*** option in the ***Preferences*** command of the ***Canvas 2.0 DA Menu*** is active (*the default setting in the Canvas Prefs file, page 8*).



The ***Information Manager*** displays various types of data, referred to as ***Auto-Dimensioning*** data, depending upon the action you are taking. The ***Information Manager*** is useful for accurately measuring, sizing and positioning objects as you work on an illustration in the *Canvas DA Window.* The numbers that are displayed in the ***Information Manager*** appear in the measurement system of the rulers. (*Refer to page 122 for information about the Canvas Rulers*).

The meaning of the measurements in the ***Information Manager*** vary depending upon the action you take: when you move the ***Arrow*** cursor around the *Canvas DA Window,* the ***Arrow's*** horizontal and vertical distance from the ruler's zero point is displayed; when you draw, select or re-size a line, the horizontal and vertical distances traveled, the angle at which the line was drawn from, its starting point and the length of the line are shown. When you draw or select a rectangle, rounded-corner rectangle or oval, the ***Information Manager*** displays the height and width of the object's *bounding rectangle.* When you draw or select an arc, it displays the height and width of the arc's

bounding rectangle and the angle of the arc; when you re-shape an arc, it displays the increase, or decrease in the angle of the arc. Drawing a polygon, it displays the horizontal and vertical distances traveled, the angle at which the *path* (line segment) was drawn from its *anchor point* (starting point). Selecting a polygon will display the height and width of the object's *bounding rectangle*; while re-shaping a polygon (*using the **Edit Polygon** command in the **Canvas 2.0 DA** menu*), only displays the ***Arrow's*** location in the *Canvas DA Window*.

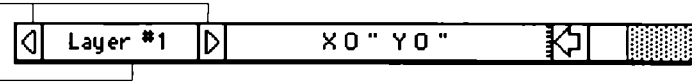
The ***Information Manager*** displays the total height and width of the *bounding rectangle* for the entire group of objects, when you select or re-size a group of objects. When you rotate an object, it displays the degree of rotation. When you drag an object to a new position in the *Canvas DA Window*, the horizontal and vertical distances that the object has moved from its original position is displayed.

Layer Monitor

To the left of the ***Information Manager*** is the ***Layer Monitor***. Canvas 2.0 DA can not create illustrations with multiple layers; however, multi-layer documents created in the Canvas 2.0 stand-alone application may be *edited*. Layers are like sheets of cellophane, whenever they are stacked on top of each other, you can look through them to view the entire illustration.

Layer Scroll Arrows
Moves between layers one at a time

Layer Monitor Display
Displays the name of the active layer



Tool Box

Located along the left side of the *Canvas DA Window* is the ***Tool Box,*** which contains 31 tools to assist you in creating your documents. Specific information regarding the function of each tool begins on page 15.

The Canvas Prefs File

The *Canvas Prefs* document, located in the System folder, contains all of the active *default* settings for a new illustration in the *Canvas Window.* Every time that you choose *New* (⌘N) from the *File* menu, the settings in the *Canvas Prefs* file will be used to create the new untitled document. The *Canvas Prefs* file is known as a *Stationery Pad* file, a template for the *Canvas DA Window.* You can tell Canvas to save a document as a *Stationery Pad* file, using the ***Save As...*** command from the ***Canvas 2.0 DA*** menu, whenever you plan to reuse that document as a template for another. However, the original *Canvas Prefs* (*Stationery Pad*) file, located in your System Folder, remains unchanged and can be reused for other documents as often as you wish.

The *Canvas Prefs* file that is shipped with the program contains the *default settings* that are referenced in this manual. These *default settings* are:

Canvas 2.0 DA Menu:

New:
- Document opens untitled with one layer

Text:
- Font: Geneva
- Size: 12 points
- Justification: Left
- Style: Plain Text

Preferences:
- Drag Display: Outlines and Objects
- Pattern Palette: #1
- Auto-Create Bitmaps: On
- Double-Click: Bitmaps

Preferences *(continued):*
- Show Ruler: Off
- Ruler #: 1
- Ruler Dimensions: Feet and Inches
- Drawing Size: 1 Page
- Show Page Breaks: Off
- Printer: LaserWriter
- Display Dimensions: Decimals
- Show Info Manager: On
- Show Size Display: Off
- Show Grid: Off
- Snap To Grid: Off
- Guides: On

Page Setup:
- Paper: US Letter
- Orientation: Upright

Print:
- Quality: Best
- Page Range: All
- Copies: 1
- Paper Feed: Automatic

Brush Shapes: Small Round
Fill Pattern: White
Pen Pattern: Solid Black
Spray Can Nozzle: Random Round
Pen Shape: 1 point x 1 point
Arrows: Off
Objects:
- Bitmap Resolution: 72 dpi
- Fill Pattern: Solid Black
- Pen Pattern: Solid Black
- Background Color: White
- Foreground Color: Black
- Ink Mode: Copy
- Pen Shape: 1 point x 1 point

Zoom Level: 1X

Stationery Pad Files

Canvas allows you to create *Stationery Pad* files, or templates, that automatically open with all of the customized settings and graphic elements that you commonly use in your documents. When you open a *Stationery Pad* files, you can start to work immediately, without changing the standard defaults in the *Canvas Prefs* file in the System folder.

To create a Canvas *Stationery Pad* file you choose *New* (⌘-*N*) from the ***File*** menu. Canvas will open a new document with the standard default settings of the *Canvas Prefs* file in the System folder. Now you can modify the settings that you use often. You can customize the ***Preferences*** option from the ***File*** menu, set and show custom ***Rulers***, change the ***Pattern Palettes*** and ***Pen Shapes*** and set your own ***Views***, among many other settings you desire. When you are finished creating the *Stationery Pad* document, choose the ***Save As...*** command from the ***File*** menu. Type in the name of the *Stationery* document; click the mouse on the *Stationery Pad* button; click the *Save* button to save your document.

Whenever you want to use one of your *Stationery Pad* templates to work on a document that is set up with the graphics and pre-defined settings that you use often choose ***Open...***(⌘-*O*) from the ***Canvas 2.0 DA*** menu, click on the name of the *Stationery Pad* document and click on the *Open* button.

Arrow Keys

Canvas employs the keyboard *Arrow* keys for the precise movement of a selected object or group of objects, or a selected portion of a paint (*bitmap*) object. Press the Left, Right, Up or Down *Arrow* key to move a selection 1 pixel at a time. You can also hold down the *Command Key* (⌘) as you press an *Arrow* key to move 10 pixels at a time, or use

the *Option* key to go 50 pixels at a time. When you want to edit a text object, the *Arrow* keys will move the text cursor up, down, left or right, to assist you in mouseless editing.

Command Keys

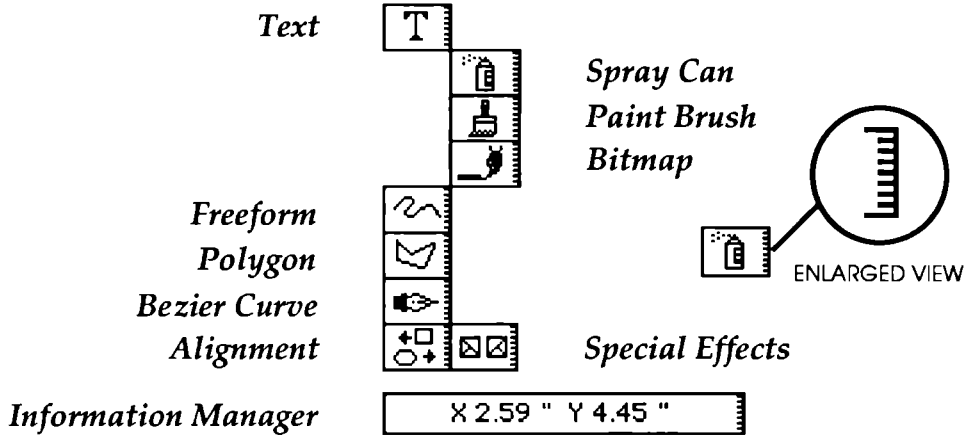
Besides using the keyboard *Arrow* keys, you can choose many commands from the keyboard, in lieu of using the pull-down menus. With these *Command Key* equivalents, you simply hold down the *Command Key* (⌘) and press a key on the keyboard to activate the command. For example, you can create a new Canvas document by pressing *Command-N* (⌘-N) from the keyboard instead of choosing *New* from the menu. *Command Keys* are quick and efficient short cuts to unlocking the power of Canvas 2.0 DA:

Bold Text	*Command-Shift-B*
Bring to Front	*Command-F*
Copy	*Command-C*
Cut	*Command-X*
Duplicate	*Command-D*
Edit Polygon	*Command-E*
Group	*Command-G*
Increase Font Size	*Command-Shift->*
Italics Text	*Command-Shift-I*
Lock	*Command-L*
New	*Command -N*
Open	*Command-O*
Paste	*Command-V*
Plain Text	*Command-Shift-P*
Print	*Command-P*
Quit	*Command-Q*
Reduce Font Size	*Command-Shift-<*
Reduce To Fit	*Command-Option-R*
Save	*Command-S*

Screen Re-Draw	*Command-K*
Select All	*Command-A*
Send to Back	*Command-]*
Shuffle Down	*Command-}*
Shuffle Up	*Command-[*
Smooth/UnSmooth	*Command-~*
Split/Bind Polygon	*Command-'*
Stop Screen Re-Draw	*Command-.*
Type Specs	*Command-T*
Underline Text	*Command-Shift-U*
Undo	*Command-Z*
Ungroup	*Command-U*

Multiplex Keys

Canvas has also defined ***Multiplex*** icons which operate as multi-function command modifiers. Press either the ***Command, Option, Shift*** or ***Control*** keys and click the mouse on a particular tool in the Canvas ***Tool Box*** and you will automatically access additional hierarchical menus, thereby "*modifying*" the behavior of that tool. All ***Multiplex*** icons are depicted with *hashed* borders on the right side of their icon boxes. The ***Multiplex*** icons are:



Saving Your Work

You should *save often* and make *backup copies* of your important documents. Saving frequently assures you that your last-saved version has the most current changes.

TOOL BOX

Chapter Contents

15 ***About the Tool Box***

17 ***The Selection Tools***

17 *Arrow Tool*

19 *Lasso Tool*

20 *Marquee Tool*

22 ***The Text Tool***

23 ***The Basic Draw Tools***

23 *Line Tool*

24 *Rectangle Tool*

25 *Rounded-Corner Rectangle Tool*

25 *Oval Tool*

27 *Arc Tool*

28 ***The Advanced Draw Tools***

28 *Freeform Tool*

29 *Polygon Tool*

29 *Bezier Curve Tool*

31 *Modifying Freeform And Polygon Shapes*

42 *Modifying Bezier Curves*

51 *Additional Options For Advanced Draw Objects*

52 ***The Paint Tools***

52 *Spray Can Tool*

53 *Paint Brush Tool*

53 *Paint Bucket Tool*

54 *Pencil Tool*

54 *Eraser Tool*

55 *Bitmap Editor Tool*

56 ***The Effects Tools***

56 *Hand Tool*

56 *Magnifying Glass Tool*

57 *Alignment Tool*

58 *Special Effects Tool*

59 ***The Mode Selectors***

60 ***The Palette Managers***

60 *Fill Pattern Manager*

61 *Pen Pattern Manager*

61 *Foreground And Background Color Managers*

62 *Pen Shape Manager*

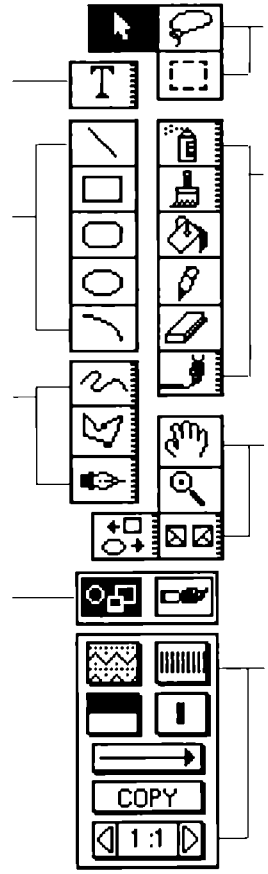
62 *Arrow Manager*

62 *Ink Manager*

63 *Zoom Manager*

About the Tool Box

When you open Canvas to create a new graphic, or open an existing illustration, the ***Tool Box*** is displayed on the left of the *"Canvas DA Window."* The ***Tool Box*** contains 31 items which can be divided into eight categories, according to how they are used:



Selection Tools
used in both the draw and paint modes to select or modify objects

Text Tool
create and modify text objects

Paint Tools
create and modify bitmaps with a spray can, paint brush, paint bucket, pen, eraser, or bitmap editor

Basic Draw Tools
draw lines, squares or rectangles, rounded corner squares or rectangles, ellipses or circles and arcs

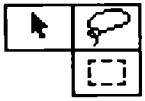
Advanced Draw Tools
draw freeform lines, polygons and Bezier curves

Effects Tools
move around or magnify an object and align or create special effects with selected objects

Mode Monitor
annunciates the draw or paint modes

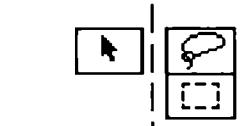
Palette Managers
pop up menus for area fill, line patterns, background and foreground color, pen shapes, line and arrow styles, ink and zoom managers

About the Selection Tools



The Canvas ***Tool Box*** contains three *Selection Tools* for your use. They are the ***Arrow, Lasso*** and ***Marquee***. As with most Macintosh programs, the Canvas *Selection Tools* permit you to select something so that the next command will affect only the selected item.

Many of the Canvas ***Tool Box*** and ***Menu*** commands only work on selected objects or areas within objects.



Objects created in the *draw mode* can only be selected with the ***Arrow*** cursor. While objects created in the *paint (bitmap) mode* can use the ***Arrow*** or ***Marquee*** cursors to select the entire object, or the ***Lasso*** or ***Marquee*** to work on a specific area of the bitmap. The description of each ***Tool Box*** or ***Menu*** command tells you which cursor(s) to use.

Arrow Tool

The ***Arrow*** cursor is used to pull down ***Menus***, select tools from the Canvas ***Tool Box***, and use the *Canvas DA Window* controls, scroll bars, icons and dialog boxes. In the *draw mode*, you use the ***Arrow*** cursor to select, move or change the size of objects you create. After you draw an object, Canvas will automatically revert to the ***Arrow*** cursor so that you can move and/or modify the object. *(Refer to the **Preferences** option in the **CANVAS 2.0 DA** menu for information on retaining the selected tool after drawing, page 76.)*

Options Available With The Arrow

With the *Arrow* tool, you can:

- select one or more objects
- de-select one or more objects
- drag a selected object or group of objects
- drag the mouse to create a *Selection Rectangle*
- stretch an object or group of objects
- move an object to a new position with the keyboard *arrow* keys
- change the fill or line patterns of an object
- change an object's line width (*pen shape*)
- convert draw objects into paint (*bitmaps*) objects
- copy or cut objects into the Clipboard
- auto trace objects
- align objects with other selected objects
- delete objects
- duplicate objects
- lock or unlock objects
- rotate objects
- flip objects horizontally, vertically or both
- print a selected object or group of objects
- change the way objects overlap other objects
- display an object's area, perimeter, width, height or rotation angle
- combine objects with another object or group of objects
- add arrowheads to lines or arcs
- re-shape a selected arc, freehand shape or polygon
- smooth or unsmooth a polygon

Lasso Tool

The *Lasso* tool is used with paint (*bitmap*) objects to select areas of the object which may not always be rectangular. When you select the *Lasso* tool from the *Tool Box*, the cursor changes its shape to look like the *Lasso*. You can then use this tool to select a region of the bitmap in any arbitrary shape.

Selecting A Bitmap Area

To use the *Lasso* tool: select the *Lasso* tool from the *Tool Box;* move the cursor inside the bitmap area, to the starting point of the area to be selected. Press the mouse button down and drag the cursor around the desired area until you reach the area of the starting point. Release the mouse button. Canvas will automatically complete the boundary and will select the enclosed area (*excluding any white space*).

Options Available With The Lasso

When you have the bitmap area selected, you can:

- drag it to a new position. To move the selected area: place the cursor inside the moving outline of the selection (*the cursor changes to the Arrow tool*), then drag the selection wherever you want inside the bounding rectangle of the bitmap or move it to a new position with the keyboard *arrow* keys.
- copy or cut it into the Clipboard
- fill or invert it
- delete it
- trace its edges
- rotate it
- flip it horizontally, vertically or both

USER TIP *YOU CAN LIMIT YOUR DRAG TO HORIZONTAL OR VERTICAL MOVEMENTS BY HOLDING DOWN ON THE SHIFT KEY AS YOU DRAG THE MOUSE.*

USER TIP *IF YOU HOLD THE* **OPTION** *KEY DOWN WHILE DRAGGING THE MOUSE, YOU WILL DRAG A COPY OF THE SELECTION WHILE THE ORIGINAL REMAINS IN PLACE.*

USER TIP *HOLDING BOTH THE ⌘ AND* **OPTION** *KEYS DOWN WHILE DRAGGING, CAUSES THE DRAGGED SELECTION TO LEAVE A TRAIL OF MULTIPLE COPIES.*

USER TIP *HOLDING THE* **OPTION** *KEY DOWN WHILE USING THE* **LASSO** *TOOL, SELECTS THE ENTIRE AREA, INCLUDING WHITE SPACE.*

USER TIP *DOUBLE-CLICKING THE* **LASSO** *TOOL ON A SELECTED SOLID COLOR AREA OF A BITMAP WILL AUTOMATICALLY SELECT ALL PIXELS IN THAT AREA OF THE BITMAP.*

De-Selecting A Bitmap Area

You can *de-select* the lassoed area by:

- clicking the mouse outside of the area
- clicking on another object
- selecting another tool from the ***Tool Box***

Marquee Tool

The ***Marquee*** tool will highlight rectangular areas of paint (*bitmap*) objects to work on. When you select the ***Marquee*** tool from the ***Tool Box,*** the cursor changes its shape to look like the ***Marquee.*** You can then use this tool to select a region of the bitmap in any rectangular shape.

Selecting A Bitmap Area

To use the ***Marquee*** tool: select the ***Marquee*** tool from the ***Tool Box,*** then move the cursor to a corner of the area to be selected. Press the mouse button down and drag the cursor across the area, then release the mouse button. Canvas will automatically select the enclosed area (*including any white space*).

Options Available With The Marquee

When you have the area selected, you can:

- drag it to a new position
- copy or cut it into the Clipboard
- fill or invert it
- delete it
- rotate it
- flip it horizontally, vertically or both

USER TIP *You can limit your drag to horizontal or vertical movements by holding down on the Shift key as you drag the mouse.*

USER TIP *If you hold the Option key down while dragging the mouse, you will drag a copy of the selection while the original remains in place.*

USER TIP *Holding both the ⌘ and Option keys down while dragging, causes the dragged selection to leave a trail of multiple copies.*

USER TIP *Holding the ⌘ key down while using the Marquee tool, snaps the Marquee tight to the object.*

USER TIP *Double clicking on the Marquee tool, when in the Paint Mode, will select the entire bitmap.*

De-Selecting A Bitmap Area

You can *de-select* a marqueed area by:

- clicking the mouse outside of the area
- clicking on another object
- selecting another tool from the ***Tool Box***

About the Text Tool

The Canvas ***Text*** tool is used to create titles in an illustration, captions or labels for parts of an illustration, or to add entire paragraphs of text. In the draw (*object*) mode, after you create text, Canvas treats the text as an object that you can manipulate like any other line or shape object. When you are working with a paint (*bitmap*) object, you must make all changes to your text before you click the mouse outside the boundaries of the text you just created. Once you click outside the text object, Canvas, in effect, *"pastes"* the text into the paint object, combining it into the bitmap.

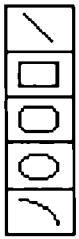
Text Tool

With the ***Text*** tool selected the cursor changes to when it is inside the *Canvas Window*. You can create text two ways: 1) you can click anywhere in an illustration and type captions, titles or labels, 2) you click in the illustration and then drag the cursor to set margins for typing paragraphs of text. Text objects can be rotated, grouped or flipped. Font types, sizes and styles and colors can be mixed, letter by letter, within a text block. You can edit text by cutting, copying or pasting it just as you would edit text in other Macintosh applications.

Multiplex Options

The ***Text*** tool icon is a multi-function ***"Multiplex"*** icon. That is, by holding down either the ⌘, *Option*, or *Shift* key as you press down and hold the mouse button on the ***Text*** tool icon, you automatically access a hierarchical menu from which you can make a selection to modify the default text settings. You can also *double-click* on the ***Text*** tool icon to display the *Type Manager* dialog.

About the Basic Draw Tools



Canvas gives you the five basic drawing tools to create objects in your illustration:

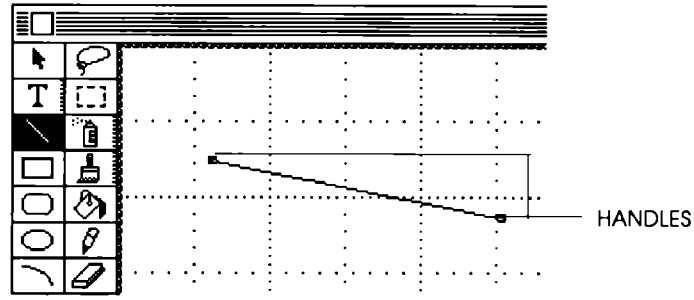
- ***Line*** - draws straight lines
- ***Rectangle*** - draws rectangles and squares with square corners
- ***Rounded-Corner Rectangle*** - Draws rectangles and squares with rounded corners
- ***Oval*** - draws circles and ovals
- ***Arc*** - draws curved lines

Unlike painted lines and shapes, objects created in the *draw mode* are *"individual entities,"* not just a collection of *"dots."* Canvas stores the information about a draw object as mathematical information (*vector objects*). Objects created in the *draw mode* will usually print much better than they appear on the screen. The reason for this is that the Macintosh screen has a resolution of 72 dpi (*dots per inch*), while print devices, such as the LaserWriter, have a resolution of 300 dpi (*dots per inch*). Canvas automatically takes the mathematical (*vector object*) information that defines the object and converts it into an image with as many *dots per inch* as the printer can produce.

Line Tool

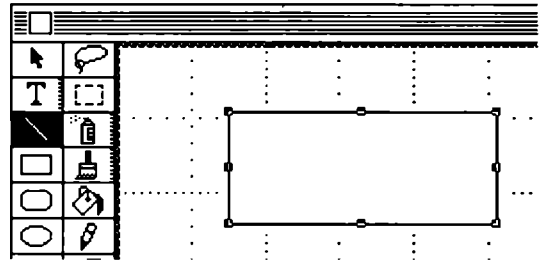
With the ***Line*** tool you can draw horizontal, vertical or diagonal straight lines. To draw a line: click the mouse on the ***Line*** tool in the ***Tool Box,*** then position the pointer in the *Canvas 2.0 DA Window.* When you position the pointer in the *Canvas 2.0 DA Window,* it becomes a *crosshair* "+" to show you the exact spot where the line will begin. Then, press the mouse button and drag it in the direction that you want the line to go. As long as you hold the mouse

button down, you can lengthen or shorten the line and change its angle of slope. When you have finished drawing the line, release the mouse button. The line will appear selected with *handles* on both ends. You can reposition the line by dragging it. In addition, you can change the line's length or angle by dragging a handle.



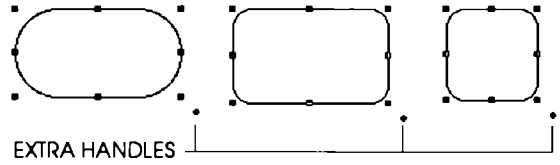
Rectangle Tool

The ***Rectangle*** tool draws rectangles and squares. To draw a rectangle: click the mouse on the ***Rectangle*** tool in the ***Tool Box.*** Position the pointer in the *Canvas Window.* When you position the pointer in the *Canvas Window,* it becomes a *crosshair* "+" to show you the exact spot where the rectangle will begin. Then, press the mouse button and drag it in the direction that you want the rectangle to go. As long as you hold the mouse button down, you can stretch or shrink the rectangle. When you have finished drawing the rectangle, release the mouse button. The rectangle will appear selected with *handles* around its boundary.



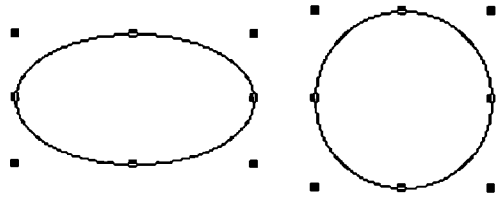
Rounded-Corner Rectangle

The ***Rounded-Corner Rectangle*** lets you draw rectangles and squares with rounded corners. You draw rounded corner rectangles the same way you draw rectangles. Rounded corner rectangles display an extra handle. By pulling or pushing on this circular handle you can change the roundness of the corners of the rectangle.



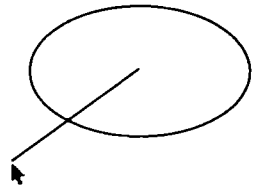
Oval Tool

The ***Oval*** tool lets you draw ovals or circles. You draw ovals and circles the same way you draw rectangles. To draw an oval, select the ***Oval*** tool and position the pointer in the drawing window, press the mouse button and drag to the desired position. When the oval is of the desired shape and size, release the mouse button. Handles appear around the oval to indicate it is selected.

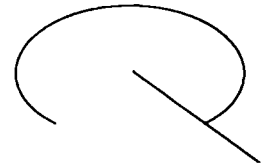


Canvas gives you the power to easily convert an oval or circle into an arc. This is extremely useful in creating standard or "exploded" pie charts.

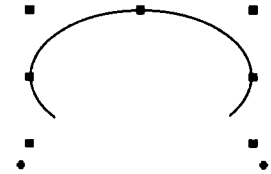
To *"open"* an oval or circle follow the procedures described for creating an oval or a circle. Then, with the oval or circle selected (*handles visible*), press down and hold the ⌘ key, and select the *Arc* tool. A dot will appear in the center of the oval. By moving the pointer into the *Canvas Window*, a *line* will extend from the center of your oval.



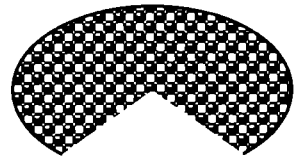
Position the *line* at the point where you want to *"open"* the oval or circle and press down and hold the mouse button. The oval or circle will disappear as you, drag the *line* around to the end point. The direction of the mouse determines the *enclosed area.* When you are satisfied with the *"opening,"*



release the mouse button.

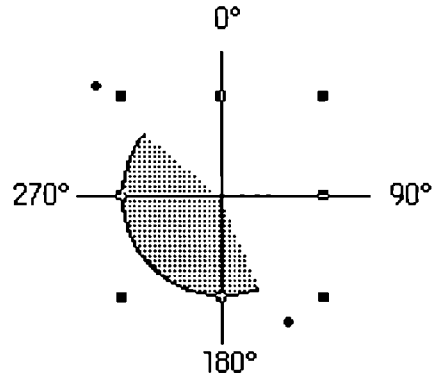


You will notice *two additional round handles.* Use these handles to adjust your *"opening."* With this object selected you can fill it, change its color, or apply any of the standard Macintosh commands or Canvas special effects commands.



Arc Tool

The *Arc* tool draws a curved line between two points. To draw an arc click on the *Arc* tool in the ***Tool Box***. Position the pointer inside the *Canvas Window* where you want the arc to begin. Press the mouse button and drag in the direction that you want the arc to go, until it is of the desired shape and size. Release the mouse button. An arc is drawn with handles around it, which indicates that it is selected.



About the Advanced Draw Tools

When you use any of the three Canvas ***Advanced Draw Tools*** to create a new object, you create line *segments* and *paths*. A *path* has two or more line *segments*, and contains various types of *points*. Each *point* determines the shape of the *path*, going into, or coming out of, the *point*. Managing these *points* is the heart of the Canvas ***Advanced Draw Tools***.

When you want to draw a *path*, you select the ***Advanced Draw Tool*** from the Canvas ***Tool Box***. The pointer turns into a *crosshair* (+). Position the *crosshair* in the *Canvas Window* where you want to begin drawing your *path*. If you are using the ***Freeform*** tool from the Canvas ***Tool Box***, you drag the mouse to create your *path*. Using either the ***Polygon*** or ***Bezier Curve*** tools, you click or drag the mouse to create the various *points* for your *paths*.

The Canvas ***Advanced Draw Tools*** are ***Multiplex*** icons. Press and hold the *Option* key as you click on the ***Advanced Draw Tool*** for the selected object, and Canvas will display a pop-up hierarchical menu. This menu will allow you to *Edit*, *Add* or *Delete* points from the selected shape.

Freeform Tool

The ***Freeform*** tool from the Canvas ***Tool Box*** lets you draw an irregularly shaped line as you would with a pen or pencil on a sheet of paper. To draw with the ***Freeform*** tool: select the ***Freeform*** tool from the ***Tool Box***. Position the ***Arrow*** in the *Canvas Window* where you want to begin drawing. When you position the ***Arrow*** in the *Canvas Window*, it becomes a *crosshair* "+" to show you the exact spot where your shape will begin. Press the mouse button

and drag it to draw your shape. As you draw, the line continues to lengthen as long as you keep the mouse button depressed. Release the mouse button when you have finished. When you release the mouse button, Canvas automatically selects the object (*handles appear around the bounding rectangle*).

Polygon Tool

The ***Polygon*** tool is used to draw irregular shapes consisting of straight lines and angles, such as triangles, pentagons, trapezoids and open-ended shapes. To draw a polygon, select the ***Polygon*** tool from the ***Tool Box.*** Position the ***Arrow*** in the *Canvas Window* where you want to begin drawing. When you position the ***Arrow*** in the *Canvas Window,* it becomes a *crosshair* "+" to show you the exact spot where your shape will begin. Click the mouse once and move it (*you do not have to hold the button down*) to draw your shape. As you move the mouse, a line follows the mouse movement. To end the line segment, click the mouse button and another line begins from that point. You continue moving the mouse and clicking to create the angular shape that you desire. When you are finished. double-click the mouse button. (*If the last point of your shape connects the polygon's starting point, then you only have to click the mouse button once.*) Canvas automatically selects the shape, and handles appear around the *bounding rectangle* of the object.

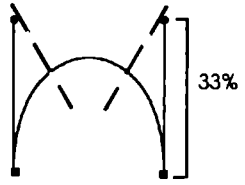
Bezier Curve Tool

The ***Bezier Curve*** tool, located in the Canvas ***Tool Box*** creates polygonal curves that are defined mathematically by four points, two *anchor points* (*displayed with square handles*) and two *direction points* (*displayed with round handles*). A Bezier Curve forms a smooth curve from these *points.* The *anchor points* define where the curve starts and ends. The *direction points* determine the shape of the curve. You can combine multiple Bezier Curves to create complex effects.

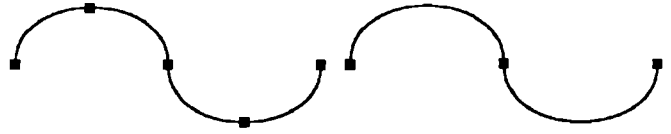
The Four Principles Of Drawing A Bezier Curve

Constructing a ***Bezier Curve*** can be simple and easy if you keep in mind four fundamental principles:

1. **The 33% principle:** draw the curve *segment* approximately one-third the length of its *direction point*.

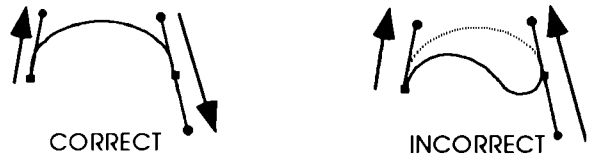


2. **The *Hump* principle:** draw continuous curve *paths* with their *anchor points* at the beginning and end of each "hump." In other words, draw each "hump" *segment*, one "hump" *segment* at a time.



3. **The *Stretch* principle:** draw "humps" with *anchor points* spaced as far apart as possible.

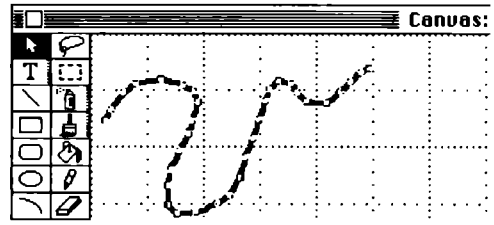
4. **The *Motion* principle:** drag the *direction point* using the same "motion" that the "hump" was drawn from its *anchor point*.



To draw a Bezier Curve, select the ***Bezier Curve*** tool from the ***Tool Box***. Position the ***Arrow*** in the *Canvas Window* where you want to begin drawing. When you position the ***Arrow*** in the *Canvas Window*, it becomes a *crosshair* "+" to show you exactly where your Bezier Curve will begin. Click the mouse once for the first *anchor point*, then move to where the second point should be, Click and drag the mouse to form the point and establish the curve's direction. As you drag the mouse, the *direction line* follows the mouse movement to create the Bezier Curve. To end the first segment of the curve and draw another, click the mouse button and another curve begins at that point. Continue moving the mouse and clicking to create multiple Bezier Curves. When finished, double-click the mouse button. (*If the last point of your shape connects the* Bezier Curve's *starting point, then you only have to click the mouse button once.*) Canvas automatically selects the shape, and handles appear around the *bounding rectangle* of the object.

Modifying Freeform and Polygon Shapes

You can modify a specific *point(s)* in a freeform or polygon shape by selecting the object with the ***Arrow*** and using the ***Edit Polygon*** (⌘-E) command from the ***Canvas DA*** menu.

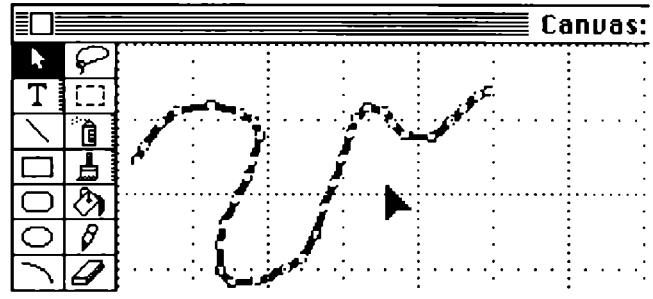


The ***Freeform*** and ***Polygon*** tools are ***Multiplex*** icons. Press and hold the *Option* key as you click on either tool to display a pop-up menu. This menu, shown on the top of the next page, will allow you to *Edit*, *Add* or *Delete* points from the selected shape.

Editing Points in Freeform or Polygon Shapes

To *edit points* in either a freeform or polygon shape:

- **Select the shape with the *Arrow* tool.**
- **Select the *Edit Polygon* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the *Option* key as you click the mouse on the respective *Freeform* or *Polygon* tool and drag to highlight the *Edit Pts* option.** Release the *Option* key after the mouse is clicked.
- **Position the cursor in the *Canvas DA Window*.** The cursor changes its shape to look like the menu selection (▶).



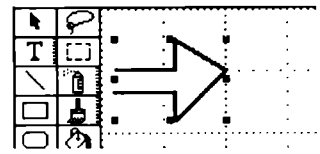
- **Whenever the ▶ cursor is over a *point* in the selected shape, the cursor changes into a *crosshair* (+).**
- **Drag the *point* you wish to *Edit* to its new location.** You can continue to *Edit points* in the selected shape.
- **When you have completed the *Edit*, click the mouse outside of the freeform shape to de-select it.**

USER TIP *WHILE EDITING A POLYGON SHAPE ONLY, PRESSING THE BACKSPACE KEY WILL DELETE THE LAST LINE DRAWN.*

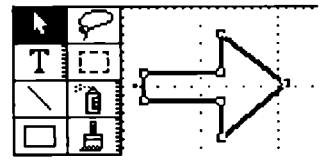
Adding Points to Freeforms and Polygons

To *add points* to a freeform or polygon shape:

- **Select the shape with the *Arrow* tool.**
- **Select the *Edit Polygon* (⌘-E) command from the *Canvas DA* menu.**



- **Hold the *Option* key as you click the mouse on the respective *Freeform* or *Polygon* tool and drag to highlight the *Add Pts* option.** Release the *Option* key after the mouse is clicked.
- **Position the cursor in the *Canvas DA Window*.** The cursor changes its shape to look like the menu selection (⊹).
- **Whenever the ⊹ cursor is over a *point* in the selected shape, the cursor changes into a *crosshair* (+).**



- **Drag on a *point* where you wish to *Add* another *point*.** You can continue to *Add points* in the selected shape.
- **When you have completed the *Add*, click the mouse outside of the shape to de-select it.**

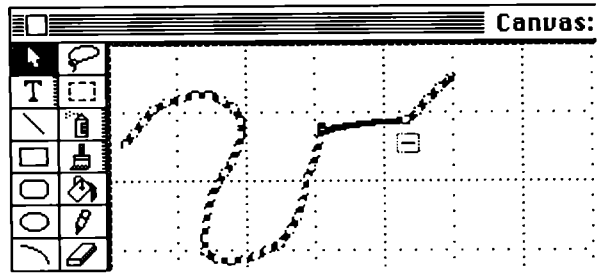
An alternate method of *adding points* to a freeform or polygon shape is:

- **Select the shape with the *Arrow* tool.**
- **Select the *Edit Polygon* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the *Option* key (the cursor changes into a ⊞).**
- **Whenever the ⊞ cursor is over a *point* in the selected shape, the cursor changes into a *crosshair*.**
- **Drag on a *point* where you wish to *Add* another *point*.** You can continue to *Add points* to the shape.
- **When you have completed the *Add*, click the mouse outside of the shape to de-select it.**

Deleting Points From Freeforms And Polygons

To *remove a point* from a freeform or polygon shape:

- **Select the shape with the *Arrow* tool.**
- **Select the *Edit Polygon* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the *Option* key as you click the mouse on the respective tool and drag to highlight the *Delete Pts* option.** Release the *Option* key after the mouse is clicked.
- **Position the cursor in the *Canvas Window*.** The cursor changes its shape to look like the menu selection (⊟).
- **Whenever the ⊟ cursor is over a *point* in the selected shape, the cursor changes into a *crosshair*.**
- **Click on a *point* that you wish to *Delete*.** You can continue to *Delete points* in the selected shape.
- **When you have completed the *Delete*, click the mouse outside of the shape to de-select it.**



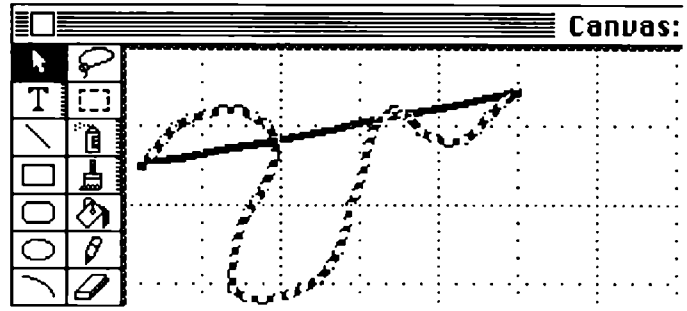
An alternate method of *Deleting points* is:

- **Select the shape with the *Arrow* tool.**
- **Select the *Edit Polygon* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the *Shift* and *Option* keys (the cursor changes into a [—]).**
- **Whenever the [—] cursor is over a *point* in the selected freeform, the cursor changes into a *crosshair* (+).**
- **Click on the *point* you wish to *Delete.*** You can continue to *Delete points* in the selected freeform shape.
- **When you have completed the *Delete,* click the mouse outside of the freeform shape to de-select it.**

Automatically Closing and Opening Freeforms and Polygons

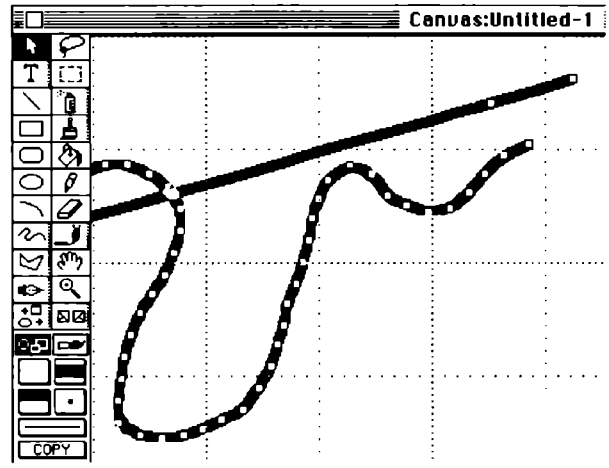
You can also *close* an "open freeform or polygon shape" and *open* a "closed freeform or polygon shape" by using the ⌘ key. To *close* an "open" shape, as illustrated on the next page:

- **Select the shape with the *Arrow* tool.**
- **Select the *Edit Polygon* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the ⌘ key as you click the mouse on the *last point* of the freeform or *either the first or last point* in the polygon.** Canvas automatically *closes* the shape by connecting the *first* and *last* points.
- **Click outside of the shape to de-select it.**



Once a freeform or polygon shape has been *closed*, you can *open* it:

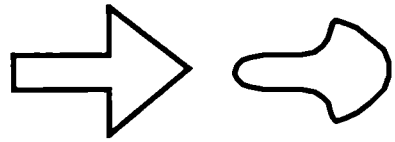
- **Select the shape with the *Arrow* tool.**
- **Select the *Edit Polygon* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the ⌘ key as you click the mouse on the *point* of the shape where you want it *opened.*** Canvas automatically *opens* the shape by cutting the connection between the *point* that you clicked on and the next *point* in line in the shape.
- **Click outside of the shape to de-select it.**



Using the UnSmooth and Smooth Commands

You can also ***Unsmooth*** a freeform shape (making it a polygon) or ***Smooth*** a polygon shape (making it a freeform). The ***Unsmooth*** command from the *Canvas DA* menu changes the smooth freeform into an angular polygon shape. Once a freeform shape has been *unsmoothed*, you can choose the ***Smooth*** command to "soften" the shape. The converse is true if the selected object is a polygon: the ***Smooth*** command will first be available, to modify the shape, followed by the ***Unsmooth*** command to sharpen the edges.

- **Select the freeform shape to unsmooth (or the polygon shape to smooth) with the *Arrow* cursor.**
- **Choose *Unsmooth (or Smooth, as applicable) Polygon* from the *Canvas DA* menu.**



Adding Cusps to Freeforms and Polygons

You can add "sharp points," known as *cusps*, to both freeform and polygon shapes. *Cusps will not smooth.* They always maintain a "sharp" image. To create a *cusp*:

- **Select the shape with the *Arrow* tool.**
- **Select the *Edit Polygon* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the *Option* key as you click the mouse on the *point* of the shape where you want to add a *cusp*.** Canvas automatically *adds* an additional *point* on top of the one that you clicked on, creating the *cusp*.
- **Click outside of the shape to de-select it.**

USER TIP *IF YOU MODIFY THE SHAPE WITH THE EDIT OPTIONS, THE CUSP WILL MAINTAIN ITS "SHARPNESS" UNLESS YOU PRESS THE* **TAB** *KEY AS YOU CLICK ON THE CUSP. USE THE* **TAB** *KEY ON A CUSP TO "PULL APART" THE TWO SUPERIMPOSED POINTS, THUS BREAKING THE CUSP.*

Moving Freeforms and Polygons

Use the *Arrow* cursor to move freeform and polygon objects around:

- **Select the object and, without releasing the mouse,**
- **Move the mouse to the desired position.** The selected object(s) will follow the movement of the mouse. If you drag the mouse outside of the *Canvas Window* , Canvas will scroll the window automatically.
- **Release the mouse button when you are satisfied with the new location.**

USER TIP *YOU CAN LIMIT YOUR DRAG TO HORIZONTAL OR VERTICAL MOVEMENTS BY HOLDING DOWN ON THE SHIFT KEY AS YOU DRAG THE MOUSE.*

USER TIP *IF YOU HOLD DOWN THE OPTION KEY AS YOU DRAG THE SELECTED OBJECT, YOU WILL LEAVE THE ORIGINAL OBJECT BEHIND, AND DRAG A COPY OF THE SELECTED OBJECT.*

USER TIP *IF YOU HOLD DOWN BOTH THE ⌘ AND OPTION KEYS AS YOU DRAG THE SELECTED OBJECT, YOU WILL LEAVE A TRAIL OF MULTIPLE COPIES OF THE DRAGGED SELECTION.*

Resizing Freeforms and Polygons

You can resize freeforms and polygons to any desired size:

- **Select the shape with the *Arrow* cursor.**
- **Position the cursor over one of the handles that appear around it's *bounding rectangle.***
- **Press the mouse on one of the handles and drag in any direction.** You will see the *bounding rectangle* change size, as it follows the mouse movement. If you drag the mouse outside of the *Canvas Window,* Canvas will scroll the window automatically.
- **Release the mouse button when you are satisfied with the new size.**

USER TIP *HOLD THE SHIFT KEY AS YOU RESIZE YOUR OBJECT TO RETAIN THE SHAPE'S ORIGINAL PROPORTIONS.*

Modifying Bezier Curves

As with all Canvas objects, you can resize the entire ***Bezier Curve*** by dragging on a *handle*, or use the ***Edit Bezier Curve*** (⌘-E) command from the ***Canvas 2.0 DA*** menu to modify a specific *point(s)* in the object.

The ***Bezier Curve*** tool is a ***Multiplex*** icon. Press and hold the *Option* key as you click on the ***Bezier Curve*** tool to display a pop-up hierarchical menu. This menu will allow you to *Edit, Add* or *Delete* points from the selected curve.

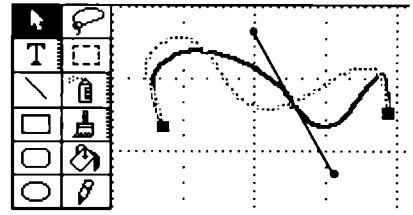
USER TIP *THE POSITION OF EACH OF THE DIRECTION POINTS AND DIRECTION LINES, IN RELATION TO ITS ANCHOR POINT, WILL DETERMINE THE SIZE AND SHAPE OF THE BEZIER CURVE, WHILE THE LENGTH OF THE DIRECTION LINE WILL DETERMINE THE HEIGHT OR DEPTH OF THE BEZIER CURVE.*

Editing Points in a Bezier Curve

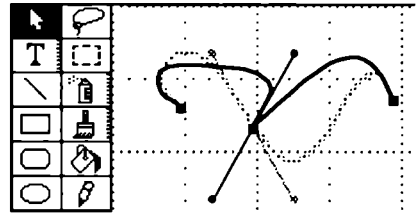
To *edit points* in a *Bezier Curve*:

- **Select the curve with the *Arrow* tool.**
- **Select the *Edit Bezier Curve* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the *Option* key as you click the mouse on the *Bezier Curve* tool and drag to highlight the *Edit Pts* option.** Release the *Option* key after the mouse is clicked.
- **Position the cursor in the *Canvas Window*.** The cursor changes its shape to look like the menu selection (▶).

- **Whenever the ▶ cursor is over an *anchor point* in the selected curve, the cursor changes into a *crosshair*.**
- **If you want to move the *anchor point* to a another location, simply drag it to its new place.** The *direction points* will be displayed with a *direction line* connecting them and the curve will *animate* on the screen with your mouse movements.



- **If you want to change the shape of the curve, click the mouse.**
- **Place the *crosshair* (+) on the *direction point* that you wish to modify and drag it until you achieve the desired shape.** The curve will *animate* on the screen with your mouse movements.



- **Release the mouse button when you have achieved the desired shape for the Bezier Curve.** The *anchor* and *direction points* will remain visible. You can continue to *Edit points* in the selected curve.
- **When you have completed the *Edit*, click the mouse outside of the curve to de-select it.** The *anchor* and *direction points* will disappear.

Adding Points to a Bezier Curve

You can also *add points* to a *Bezier Curve*:

- **Select the curve with the *Arrow* tool.**
- **Select the *Edit Bezier Curve* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the *Option* key as you click the mouse on the *Bezier Curve* tool and drag to highlight the *Add Pts* option.** Release the *Option* key after the mouse is clicked.
- **Position the cursor in the *Canvas DA Window*.** The cursor changes its shape to look like the menu selection ( ).
- **Whenever the cursor is over an *anchor point* in the selected curve, the cursor changes into a *crosshair* (+).**
- **Click and drag on an *anchor point* where you wish to *Add* another *point*.** You can continue to *Add points* in the selected curve.

- **When you have completed the *Add*, click the mouse outside of the curve to de-select it.**

An alternate means of *adding points* to a *Bezier Curve* is:

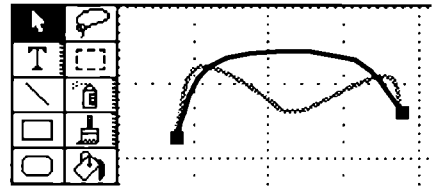
- **Select the curve with the *Arrow* tool.**
- **Select the *Edit Bezier Curve* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the *Option* key as you click and drag the mouse on an *anchor point*.**
- **When you have completed *adding anchor points*, click the mouse outside of the curve to de-select it.**

USER TIP *YOU CAN ADD A CUSP TO A* ***BEZIER CURVE*** *BY CLICKING THE MOUSE WITHOUT MOVING THE CONTROL POINT. LIKE POLYGONS, USE THE* ***TAB*** *KEY TO PULL A CUSP APART.*

Removing Points From A Bezier Curve

Canvas also allow you to *delete points* in a *Bezier Curve:*

- **Select the curve with the *Arrow* tool.**
- **Select the *Edit Bezier Curve* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the *Option* key as you click the mouse on the *Bezier Curve* tool and drag to highlight the *Delete Pts* option.** Release the *Option* key clicking.
- **Position the cursor in the *Canvas DA Window*.** The cursor changes its shape into: ⊟.
- **Whenever the ⊟ cursor is over an *anchor point*, the cursor changes into a *crosshair*.**
- **Click on the *anchor point* to be deleted.** You can continue to delete *anchor points* in the selected curve.



- **When you have completed the *Delete*, click the mouse outside of the curve to de-select it.**

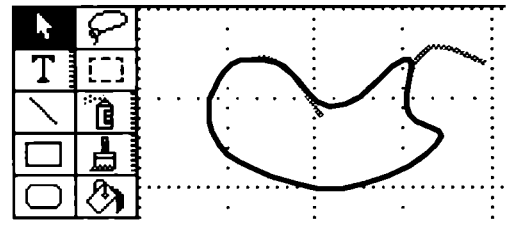
An alternate means of *deleting points* in a *Bezier Curve* is:

- **Select the curve with the *Arrow* tool.**
- **Select the *Edit Bezier Curve* (⌘-E) command from the *Canvas DA* menu.**
- **Hold the *Shift* and *Option* keys as you click the mouse on an *anchor point*.** The *point* is deleted.
- **When you have completed *deleting anchor points*, click the mouse outside of the curve to de-select it.**

Closing And Opening Bezier Curves

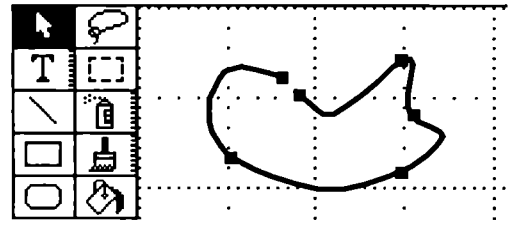
You can *close* an "open Bezier Curve" and *open* a "closed Bezier Curve" by using the ⌘ key. To *close* an "open" Bezier Curve:

- **Select the Bezier Curve with the *Arrow* tool.**
- **Select the *Edit Bezier Curve* (⌘-E) command from the *Canvas DA* menu.**
- **Press and hold the ⌘ key as you click the mouse on the *point* to be closed.** Canvas automatically closes the curve, connecting the *first* and *last points.*
- **Click outside of the Bezier Curve to de-select it.**



Once a Bezier Curve has been *closed,* you can *open* it:

- **Select the Bezier Curve with the *Arrow* tool.**
- **Select the *Edit Bezier Curve* (⌘-E) command from the *Canvas DA* menu.**
- **Press and hold the ⌘ key as you click the mouse on the *point* of the curve where you want it *opened.*** Canvas automatically *opens* the curve by cutting the connection between the *point* that you clicked on and the next *point* in the curve.
- **Click outside of the Bezier Curve to de-select it.**



Moving Bezier Curves

Use the *Arrow* cursor to move Bezier Curves around:

- **Select the Bezier Curve and, without releasing the mouse button,**
- **Move the mouse to the desired position.** The selected Bezier Curve(s) will follow the movement of the mouse. If you drag the mouse out of the *Canvas DA Window,* Canvas will scroll the window automatically.
- **Release the mouse button when you are satisfied with the new location.**

USER TIP *YOU CAN LIMIT YOUR DRAG TO HORIZONTAL OR VERTICAL MOVEMENTS BY HOLDING DOWN ON THE* **SHIFT** *KEY AS YOU DRAG THE MOUSE.*

USER TIP *IF YOU HOLD DOWN THE* **OPTION** *KEY AS YOU DRAG THE SELECTED BEZIER CURVE, YOU WILL LEAVE THE ORIGINAL BEZIER CURVE BEHIND, AND DRAG A COPY OF THE SELECTED BEZIER CURVE.*

USER TIP *IF YOU HOLD DOWN BOTH THE ⌘ AND* **OPTION** *KEYS AS YOU DRAG THE SELECTED BEZIER CURVE, YOU WILL LEAVE A TRAIL OF MULTIPLE COPIES OF THE DRAGGED SELECTION.*

Resizing Bezier Curves

You can resize Bezier Curves to any desired size:

- **Select the Bezier Curve with the *Arrow* cursor.**
- **Position the cursor over one of the handles that appear around it's *bounding rectangle.*** You will notice the cursor will change shape into a *"crosshair."*
- **Press the mouse on one of the handles and drag in any direction.** You will see the *bounding rectangle* change size, as it follows the mouse movement. If you drag the mouse outside of the *Canvas DA Window,* Canvas will scroll the window automatically.
- **Release the mouse button when you are satisfied with the new size.**

Additional Options For Advanced Draw Objects

Additionally, when you have a freeform, polygon or Bezier curve selected, you can:

- Move it to a new position with the *Keyboard Arrows.*
- Change its line pattern from the *Pen Pattern Manager* in the *Tool Box.*
- Change its line shape from the *Pen Shape Manager* in the *Tool Box.*
- Copy (⌘-C) or Cut (⌘-X) it into the Clipboard from the *Edit* menu.
- Fill it using the *Fill Pattern Manager* in the *Tool Box.*
- Align it with other selected objects by choosing either the *Alignment* tool in the *Tool Box.*
- Duplicate it from the *Canvas DA* menu using the *Duplicate* (⌘-D) command.
- Lock (⌘-L) or Unlock it from the *Canvas DA* menu.
- Rotate it from the *Special Effects* tool in the *Tool Box.*
- Flip it horizontally, vertically or both from the *Special Effects* tool in the *Tool Box.*
- Print (⌘-P) it from the *File* menu.
- Change the way it overlaps other objects with the *Bring to Front* (⌘-F), *Send to Back* (⌘-J), *Shuffle Up* (⌘-[) and *Shuffle Down* (⌘-]) commands in the *Object* menu.
- Display dimensioning from the *Information Manager.*

About the Paint Tools

There are six ***Paint Tools*** in the Canvas ***Tool Box*** which are used to create paint (*bitmap*) objects:

- ***Spray Can*** - applies a coat of *paint* to the paint object, like an airbrush, in the currently selected ***Pen Pattern***
- ***Paint Brush*** - applies *paint* to a paint object in the currently selected ***Pen Pattern***
- ***Paint Bucket*** - fills any enclosed area in the paint object with the currently selected ***Fill Pattern***
- ***Pencil*** - applies a thin trail of paint in the paint object, provided the mouse button is depressed
- ***Eraser*** - removes any unwanted part of the paint object by changing the pixels in the selected picture
- ***Bitmap Creator***- provides easy access to the paint mode and control of the bitmap's resolution

Bitmap oriented graphics programs work by manipulating individual dots or *pixels*. When you paint a circle, you are actually turning hundreds of *pixels*, in the shape of a circle, to black. It looks like a circle on the screen, but it is really just a bunch of dots. If you ever want to remove this circle, you will have to *erase* it, much like you would erase something on a sheet of paper.

Spray Can Tool

The ***Spray Can*** tool, from the ***Tool Box***, applies the currently selected ***Pen Pattern*** to the inside of a paint (*bitmap*) object using an airbrush effect. The ***Spray Can*** tool works like a real can of spray paint. If you drag the spray can quickly, you leave a thin layer of *paint* behind. If you move the can slowly, you leave a thicker "coat."

The ***Spray Can*** tool is a ***Multiplex*** icon. By using the *Option key* with the ***Spray Can*** tool icon, Canvas displays a window of the available nozzle shapes, from which you can make a selection. To use the ***Multiplex*** function of the ***Spray Can*** icon press and hold the *Option key* as you choose the ***Spray Can*** tool from the ***Tool Box.*** Release the *Option* key and drag the mouse across the nozzle shapes, until the *square cursor* encloses your selection, then release the mouse button.

USER TIP *THE SPRAY CAN CAN ONLY SPRAY BLACK DOTS. HOWEVER, IF YOU USE THE* ***BIC*** *MODE IN THE* ***INK MANAGER****, YOU CAN CREATE THE EFFECT OF SPRAY PAINTING WITH A WHITE PATTERN.*

Paint Brush Tool

The ***Paint Brush*** tool from the ***Tool Box*** applies paint in the currently selected ***Pen Pattern*** and ***Pen Shape*** to any paint object. To use the ***Paint Brush,*** click the mouse on the ***Paint Brush*** tool. Press and hold the mouse button down to draw. (*As long as you hold the mouse button down, the paint will continue to flow.*) When the ***Paint Brush*** tool is outside of a paint (*bitmap*) object, it appears *grayed* until the mouse button is pressed. The ***Paint Brush*** tool also is a ***Multiplex*** icon. By using the *Option key* with the ***Paint Brush*** tool icon, Canvas displays a window of the available brush tips, from which you can make a selection. Press and hold the *Option* key as you choose the ***Paint Brush*** tool from the ***Tool Box.*** Release the *Option* key and drag the mouse across the brush tips, until the *square cursor* encloses your selection, then release the mouse button.

Paint Bucket Tool

The ***Paint Bucket*** tool, from the ***Tool Box,*** fills any continuous white area, within the boundaries of a paint (*bitmap*) object, with the current ***Fill Pattern.*** To use the ***Paint Bucket,*** click on the ***Paint Bucket*** tool in the ***Tool***

Box. Position the end of the pouring paint bucket icon in any *bounded* area within a paint object. Click the mouse button to *pour* the paint. When the ***Paint Bucket*** tool is outside of a paint (*bitmap*) object, it is not available for use and Canvas will "*gray*" the tool.

Pencil Tool

The ***Pencil*** tool draws a thin line of black or white ink inside any paint object. It works by turning the individual dots of a bitmap on or off. To use the ***Pencil*** tool, click the mouse on the ***Pencil*** tool in the ***Tool Box***. Position the ***Pencil*** icon inside any paint (*bitmap*) object. Press the mouse button and draw. As long as you hold the button down, the ***Pencil*** will leave a black or white trail behind. When the ***Pencil*** tool is outside of a paint (*bitmap*) object, it is not available for use and Canvas will "*gray*" the tool.

Eraser Tool

The ***Eraser*** tool removes any unwanted part of a paint (*bitmap*) object. It affects the dots contained within a selected paint (*bitmap*) object only. Click on the ***Eraser*** tool in the ***Tool Box***. Position the pointer inside any paint type object, then press the mouse button and sweep it back and forth to erase everything underneath it.

USER TIP *IF YOU MAKE A MISTAKE YOU CAN ALWAYS* **UNDO** *(⌘-Z) YOUR LAST ACTION FROM THE* **EDIT** *MENU.*

USER TIP *DOUBLE CLICK ON THE* **ERASER** *TOOL TO CLEAR A SELECTED PAINT OBJECT.*

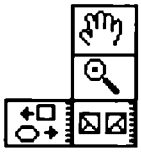
USER TIP *HOLDING DOWN THE SHIFT KEY RESTRICTS THE* **ERASER** *TO FOLLOW A STRAIGHT HORIZONTAL OR VERTICAL PATH.*

Bitmap Editor Tool

The ***Bitmap Editor*** tool gives you immediate access to the paint (*bitmap*) mode. It also allows you to define the resolution (*dots per inch - dpi*) of a selected paint (*bitmap*) object. To use the ***Bitmap Editor*** tool to access the paint mode, click on the ***Bitmap Editor*** tool in the ***Tool Box*** . When the cursor is placed in the *Canvas Window* it changes into a *crosshair* (+) so that you can define the painting (*bitmap*) area. Press and hold the mouse button as you drag the *crosshair* (+). Canvas draws the outline of an *"invisible"* rectangle which is the painting area. Then, when the painting area is of the size you desire, release the mouse button. Canvas automatically selects the ***Paint Brush*** tool so you can begin painting.

The ***Bitmap Editor*** tool is a ***Multiplex*** icon. By using the *Option key* with the ***Bitmap Editor*** tool icon, Canvas displays a menu of the available resolution levels (*dots per inch - dpi*) for a selected paint (*bitmap*) object. To use the ***Multiplex*** function of the ***Bitmap Editor*** icon, press and hold the *Option key* as you choose the ***Bitmap Editor*** tool from the ***Tool Box.*** Release the *Option* key and drag the mouse down the resolution level choices, until your selection is highlighted. Release the mouse button. Canvas automatically resets bitmap resolution so that the next bitmap you create with the ***Bitmap Editor*** tool is set to your new resolution level.

About the Effects Tools



The Canvas ***Tool Box*** contains four ***Effects*** tools which are used in any layer of the *Canvas Window* to assist you with your illustration.

The ***Effects*** tools are:

- ***Hand*** - scrolls the *Canvas Window*
- ***Magnifying Glass*** - changes the size of the view of the *Canvas Window*
- ***Alignment*** - easily aligns any number of objects to a point or to a line
- ***Special Effects*** - fills, inverts, rotates or flips selected objects

Hand Tool

The ***Hand*** tool is available from the ***Tool Box*** or by pressing down and holding the *Spacebar* to scroll the *Canvas Window*. Select the ***Hand*** tool from the ***Tool Box,*** (*the cursor changes it's shape to look like the* ***Hand*** *tool*). Press and hold the mouse button as you drag your illustration in any direction that you like. Notice that your illustration moves along with the ***Hand,*** and the ***Scroll Boxes*** shift automatically. Release the mouse button when you have finished scrolling your illustration.

Magnifying Glass Tool

The ***Magnifying Glass*** tool is available from the ***Tool Box*** to *zoom in* on or *out* of the *Canvas Window.* You can view a specific area of an illustration with varying levels of detail with the ***Magnifying Glass.*** To use the ***Magnifying Glass*** tool to enlarge an area, select the ***Magnifying Glass*** tool from the ***Tool Box*** (*the cursor changes it's shape to look like the* ***Magnifying Glass*** *with a +*). Position the ***Magnifying***

Welcome To The Future Of Computer Graphics

Welcome to Canvas 2.0 DA™, the most powerful graphics desk accessory environment for the Apple® Macintosh™. Canvas 2.0 DA is like a combination of MacDraw® and Mac-Paint ®. While Canvas 2.0 DA is easy to use at the entry level, it will allow you to progress up to its many advanced techniques at your own pace.

There are two very different methods available for doing graphics on the Macintosh. One method is said to be "bitmap oriented" or "painting," while the other is referred to as "object oriented" or "drawing."

A bitmap specifies which pixels (picture elements) or screen dots are black and which are white. On the Macintosh II, this is extended to gray scales or color. Black pixels may be arrayed in a line or a circle, but once such a figure has been created in a paint program it is just a path of dots. Moving or erasing one pixel has no effect on its neighbors. In bitmaps, only areas can be moved or reshaped. Although you may recognize objects within a bitmap painting, they are no longer represented as such within the computer. What you see on the screen is the bitmap, a set of dots.

Object–oriented graphics applications work by manipulating mathematically defined "objects," which are represented by the picture on your monitor screen. You may recall that a geometrical shape is described by an equation. A straight line is specified by its slope and any one point it passes through. A circle is identified by its radius and the location of its center. In creating Macintosh graphics, you also specify the thickness of lines or arcs, and their end points. In any case, just a few pieces of information serve to describe a simple object completely, and your Macintosh is very good at such things.

When you draw an "object" with Canvas, whether it is a line or a complex curve created with the Bezier Curve tool, you are defining it by its size, shape and position on the screen. You can always move, alter or delete it without disturbing other objects around it, even if they overlap. Objects can be grouped, moved or altered together, and then ungrouped. Objects cannot be edited with paint tools, which change individual pixels, since what you see on the screen is only a representation of an object.

It is common for the needs of even a simple illustration not to fit entirely into either one of these two graphics categories. With Canvas you can work with object–oriented graphics and with bitmaps, "paint objects," all at one time in a single illustration. You choose the best tool and method for each and every element in a complex illustration.

With the advent of the 300 dpi (dots–per–inch) LaserWriter® and the ability to link the Macintosh to even higher–resolution printers and slide makers, the advantage of object–oriented drawing became even more important. Mathematical descriptions of objects can be stored at extremely high levels of precision. Now, any piece of artwork will be rendered as delicately and smoothly as the resolution of the printer or other output device permits. Canvas makes full use of the resolution of your printer in a second way: by transforming object oriented graphics into bitmaps at any user–specified resolution from 72 to 300dpi and by importing high resolution, scanned bitmaps. Canvas also allows you to import MacPaint, PICT/PICT2 and TIFF (including FAX modem CCIT Group 3) documents and to save your own drawings in these formats as well.

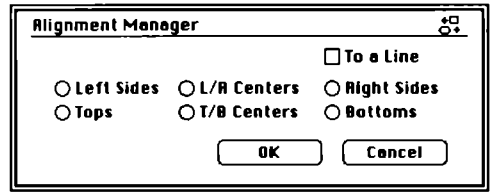
Glass icon in the area of the illustration to enlarge. Click the mouse button once and the *Canvas Window* will double the magnification level to *zoom in* on the area of the illustration.

To use the ***Magnifying Glass*** tool to reduce an area, follow the same procedures as described above, except you hold the *Shift* key as you press on the ***Magnifying Glass*** tool (*the cursor changes it's shape to look like the* ***Magnifying Glass*** *with a -*). Click the mouse button once and the *Canvas Window* will decrease its magnification level to *zoom out* on the area of the illustration.

USER TIP *THE MAGNIFICATION LEVELS INCREASE OR DECREASE GEOMETRICALLY: 2X, 4X, 8X, 16X AND 32X.*

Alignment Tool

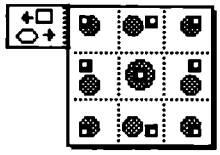
The ***Alignment*** tool allows you to easily align any number of existing objects. With at least one object selected, when you click the mouse on the ***Alignment*** tool icon, the *Alignment Manager* dialog appears:



From this dialog, you can choose between a number of different alignment options.

USER TIP *CLICKING ON THE* ***ALIGNMENT*** *ICON WHILE HOLDING DOWN THE ⌘ KEY, WILL BYPASS THE* ***ALIGN OBJECTS*** *DIALOG. THE SELECTED OBJECTS WILL BE ALIGNED IMMEDIATELY USING THE PREVIOUSLY SELECTED ALIGNMENT CRITERIA.*

The *Alignment* tool is a *Multiplex* icon. By using the *Option* key with the *Alignment* tool icon, Canvas displays a menu with 9 of the most popular alignment options to select from:

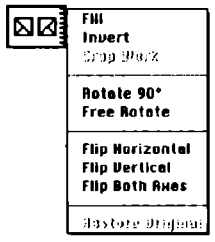


Tops Left Sides	Tops	Tops Right Sides
Left Sides	Centers	Right Sides
Bottoms Left Sides	Bottoms	Bottoms Right Sides

To use the *Multiplex* function of the *Alignment* icon, first select the objects to align. Then press and hold the *Option* key as you choose the *Alignment* tool from the *Tool Box*. Release the *Option* key and drag the mouse across the alignment options until your selection is highlighted. Release the mouse button. Canvas automatically aligns the selected objects.

Special Effects Tool

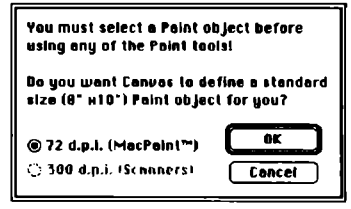
The *Special Effects* tool gives you access to 9 effects: *Fill, Invert, Crop Work, Rotate 90°, Free Rotate, Flip Horizontal, Flip Vertical, Flip Both Axis and Restore Original*. The *Fill* and *Invert* options are only available for areas of paint (*bitmap*) objects selected with either the *Lasso* or the *Marquee* tools, *Crop Work* applies to entire paint (*bitmap*) objects, while the remaining options are available for both *draw* and *paint* objects. To use the *Special Effects* tool, first select the object(s) to apply the effect on. Then choose the *Special Effects* tool from the *Tool Box*. Drag the mouse until your selection is highlighted, then release the mouse button. Canvas will automatically apply the effect to the selected object(s).



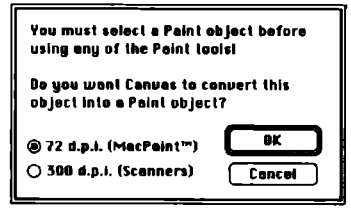
About the Mode Selectors

Most Canvas tools are sensitive to the operation being performed. For example, if you select the ***Pencil*** tool, Canvas will only allow its use on a paint (*bitmap*) object. You can control this mechanism directly by selecting a paint object first, and then clicking on the ***Paint Mode Selector***. Likewise, if you are working with paint tools on a paint object, you can click on the ***Draw Mode Selector*** to activate the ***Arrow*** tool and begin performing object operations on the illustration. Double-clicking on a *paint object* switches Canvas to the ***Paint Mode***. Clicking on the ***Arrow*** tool, switches Canvas to the ***Draw Mode***.

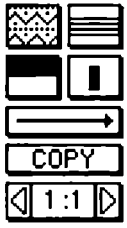
If you click on the ***Paint Mode Selector*** icon and there are no objects present in the drawing, the following dialog will be displayed:


You must select a Paint object before using any of the Paint tools!
Do you want Canvas to define a standard size (8" x10") Paint object for you?
72 d.p.i. (MacPaint™)
300 d.p.i. (Scanners)
OK
Cancel

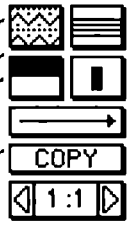
Clicking on the ***Paint Mode Selector*** icon and the selected object is ***NOT*** a paint object, Canvas allows you to create a paint object within the selected object's *bounding rectangle.*


You must select a Paint object before using any of the Paint tools!
Do you want Canvas to convert this object into a Paint object?
72 d.p.i. (MacPaint™)
300 d.p.i. (Scanners)
OK
Cancel

About the Palette Managers



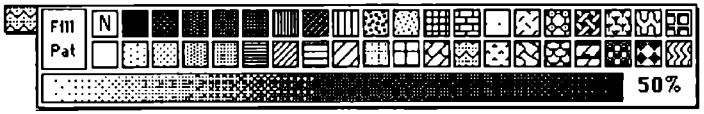
When you click on one of the Canvas ***Palette Managers,*** in the ***Tool Box,*** a *pop up hierarchical menu* appears. ***Palette Managers*** work just like the menus in the ***Canvas Menu Bar,*** except they *pop up* in different places. They are very convenient and fast. The ***Palette Managers*** are:



Fill Pattern Manager
Foreground Color Manager
Background Color Manager
Ink Manager
Line PatternManager
Pen Shape Manager
Arrow Manager
Zoom Manager

Fill Pattern Manager

The ***Fill Pattern Manager*** determines the pattern or gray scale level used to fill the interior area of any object. It also determines the pattern used by the ***Paint Bucket*** and the ***Fill*** special effect. The current ***Fill Pattern*** is always shown in the ***Fill Pattern Manager*** selector.

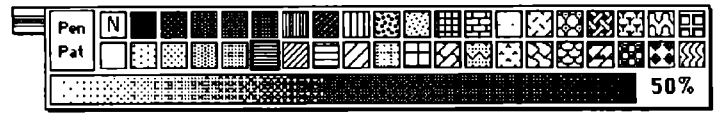


To change the ***Fill Pattern*** of a selected object or to change the current default setting if no object is selected, press the mouse on the ***Fill Pattern Manager.*** Drag the mouse to the desired fill pattern, then release the mouse button. You can also change ***Fill Pattern*** palettes. Hold the *Shift* key as you press on the ***Fill Pattern*** icon to get the *first palette;* the *Option* key displays the *second palette; and* the ⌘ key gives you the *third palette.*

USER TIP *SINCE THE FILL PATTERN MANAGER AND THE PEN PATTERN MANAGER USE THE SAME PATTERN PALETTES, CHANGING THE ACTIVE PALETTE OF ONE ALSO CHANGES THE ACTIVE PALETTE OF THE OTHER.*

Pen Pattern Manager

The ***Pen Pattern Manager*** determines the pattern or gray scale level used to draw lines or borders around all objects. It also determines the pattern used by the ***Spray Can*** and the ***Paint Brush*** within a paint object. The current pen pattern is always shown in the ***Pen Pattern Manager*** window.



To change the ***Pen Pattern*** of a selected object or to change the current default setting if no object is selected, press the mouse on the ***Pen Pattern Manager*** and drag the mouse to the desired pen pattern, then release the button. You can also change ***Pen Pattern*** palettes: hold the *Shift* key as you press on the ***Pen Pattern Manager*** to get the *first palette;* hold the *Option* key for the *second palette;* the ⌘ key to get the *third palette.*

Foreground Manager
Background Manager

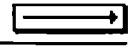
The ***Foreground*** and ***Background Color Managers*** determine the colors Canvas uses to draw and print all objects. Bitmap objects can be assigned ***Foreground*** and ***Background*** colors to be used throughout. To change the ***Foreground*** and ***Background Color*** of a selected object or to change the current default setting if no object is selected: press the mouse button on either the ***Foreground*** or ***Background Color*** icon and drag the mouse to the desired color, then release the mouse button.

Pen Shape Manager

The ***Pen Shape Manager*** determines the pen shape Canvas uses to draw the borders around all objects. It also determines the type of the border used to paint basic shapes inside a paint object. To change the ***Pen Shape*** of a selected object or to change the current default setting if no object is selected: press the mouse on the ***Pen Shape Manager.*** Drag the mouse to the desired pen shape, then release the mouse button.

USER TIP *CANVAS ALLOWS YOU TO SPECIFY PEN SHAPES WHERE ONE OF THE SIDES HAS NO THICKNESS, THIS FEATURE CAN RESULT IN SOME INTERESTING EFFECTS ESPECIALLY WITH OVALS AND CIRCLES. POSTSCRIPT, HOWEVER, DOES NOT SUPPORT A PEN SHAPE WHERE ONE SIDE HAS NO WIDTH. THEREFORE, LINES OR OBJECTS OF THIS TYPE (E.G. FRAME AROUND A BOX ETC...) WILL NOT HAVE A FRAME AT ALL ON A LASERWRITER.*

Arrow Manager



The *Arrow Manager* determines the type of line to draw. The five types available are: plain, left arrowhead, right arrowhead, double arrowhead and auto dimensioning arrowhead. Use the *Arrow Manager* to change the line type of a selected line or to change the current default setting if no object is selected: press the mouse button on the *Arrow Manager* icon; drag the mouse to the desired line type; then, release the button.

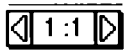
Ink Manager

The *Ink Manager* icon determines the *ink type* that Canvas uses to fill and paint all bitmap objects. The *ink* selections allow you to create various special effects in your illustration by changing what happens when one paint (*bitmap*) object *overlaps* another.

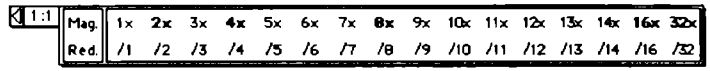
The ***Ink Manager*** has four transfer modes from which you can select: *Copy, Or, Xor* and *Bic*. Each mode has a *reversal*, that is, *Not Copy, Not Or, Not Xor* and *Not Bic*. *Reversals* work the same, except that the selected object is *first inverted*, then the transformation is applied to it. To use the ***Ink Manager*** on a selected object, or to change the current default setting if no object is selected, press the mouse button on the ***Ink Manager***. Drag the mouse to the desired mode, then release the button.

USER TIP *ON AN IMAGEWRITER PRINTER ALL TRANSFER MODES FROM THE* ***Ink Manager*** *WILL PRINT JUST LIKE YOU SEE THEM ON THE SCREEN. ON A LASERWRITER ONLY BITMAP OBJECTS WILL PRINT LIKE THE SCREEN IMAGE, REGARDLESS OF THE SETTING IN THE* ***INK MANAGER****. DRAW OBJECTS WILL PRINT IN THE COPY MODE ONLY.*

Zoom Manager



The ***Zoom Manager*** allows you to change the ***View's*** magnification or reduction level. You can *zoom in* to a 32 times magnification level or *zoom out* to a 32 times reduction level. You can draw, edit, type or paint without limitations.



To change the current ***Zoom Manager's*** magnification or reduction level: press the mouse button on the ***Zoom Manager*** icon and drag to the desired selection. Release the button. You can also use the ***Zoom In*** or ***Zoom Out*** arrows: the *right* arrow increases the magnification level (***Zoom In***); the *left* arrow decreases it (***Zoom Out***).

Magnification levels displayed in **boldface** type, indicate the levels at which Canvas allows editing of high resolution bitmaps (2x, 4x, 8x, 16x and 32x).

59 The File Menu

59 Close
59 Quit

60 The Edit Menu

60 Undo
61 Cut
62 Copy
62 Paste
63 Clear

64 The Canvas DA Menu
64 New
64 Open
65 Save As
66 Bring to Front
66 Send to Back
66 Group
67 Ungroup
67 Edit Polygon
68 Smooth Polygon
69 Type
70 Page Setup
70 Print
71 Preferences
74 Options
74 Quit

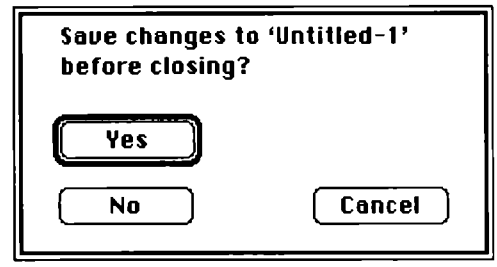
76 Index

About the File Menu

The File menu lists commands that pertain to your entire illustration. From this menu you can close an existing illustration or quit the desk accessory.

Close

Close will put away the top-most illustration. If you have made any changes to the illustration since the last time it was saved, or if it is a new document, Canvas will give you the opportunity to save your work before closing the window. This is the same as clicking in the *Close Box* (located in the upper left corner of the *Canvas Window*).



Quit

Quit will close all open Canvas illustrations and return you to the Finder desktop. If a Canvas illustration is open and you made changes to the document since it was last saved, Canvas will display a "Save changes?" dialog before allowing you to quit.

About the Edit Menu

The ***Edit*** menu lists the standard Macintosh editing commands for undo, cut, copy and paste.

Undo ⌘Z

Undo will reverse your last action.

When you choose ***Undo***, Canvas deletes the last change that you made to your illustration. However, the ***Undo*** command will not work with commands to cancel any non-editing type actions:

- scrolling through your Canvas illustration
- selecting or deselecting elements in a Canvas graphic
- reverting to the last saved version of your illustration

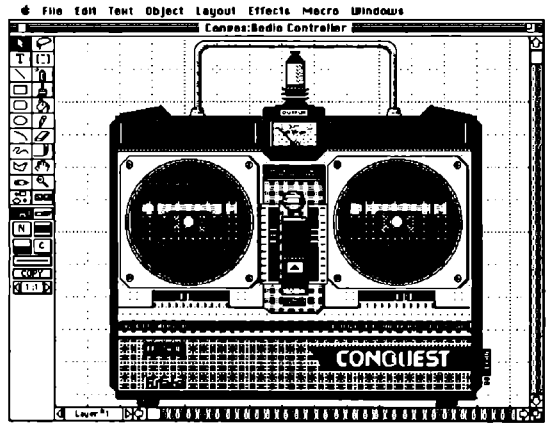
USER TIP *When you use the* **Undo** *command, Canvas will always allow you to undo whatever your last undo command accomplished. Simply reselect the* **Undo** *command again.*

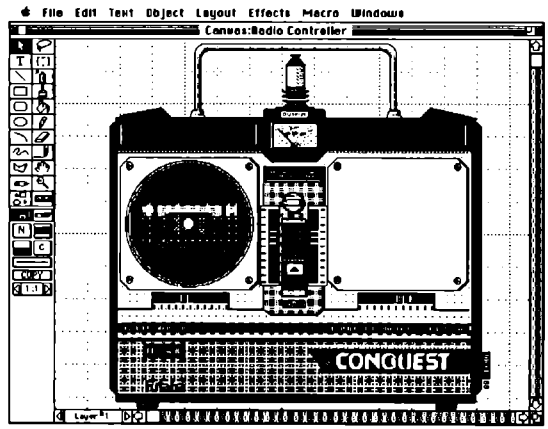
USER TIP *The Canvas 2.0 DA has no control over the state of the Edit menu. Some applications "grey out" the "Undo" command at times. If the "Undo" command is disabled by the host application for any reason you won't be able to access the desk accessory's undo function even though it will be fully operational.*

Cut ⌘X

The *Cut* command removes any selected object, groups of objects or selected area from your illustration and places it into the Clipboard.

Canvas copies all of the unique specifications that are defined for the deleted object, group of objects or selected area, into the Clipboard as well. This is a very handy feature, since Canvas will retain all of this information when you use the ***Paste*** command. The last cut selection remains in the Clipboard until the next time that you ***Cut*** or use the ***Copy*** command.





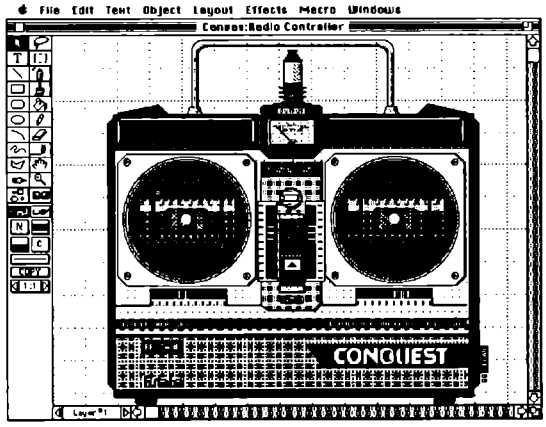
Copy ⌘C

The *Copy* command will move a copy of the selected object, groups of objects or selected area of your illustration into the Clipboard, but it will not remove it from your document. The selection will remain in the Clipboard until the next time that you use the ***Cut*** or ***Copy*** commands.

USER TIP *USE THE COPY COMMAND WHEN YOU WANT TO REPEAT THE SELECTION BY COPYING IT AND THEN PASTING IT SOMEWHERE ELSE IN YOUR CURRENT ILLUSTRATION, INTO ANOTHER ILLUSTRATION OR INTO THE SCRAPBOOK.*

Paste ⌘V

Paste will insert the contents of the Clipboard into your illustration. However, the ***Paste*** command will not work if the Clipboard is empty.



When you paste an image into your illustration, it remains selected so that you can move it into position. Once it is properly aligned, click outside of the dotted image area to drop it into your illustration.

USER TIP *SELECTIONS ARE PASTED INTO AN ILLUSTRATION AT THE CURRENT CANVAS MAGNIFICATION LEVEL, REGARDLESS OF WHAT THE IMAGE'S MAGNIFICATION LEVEL WAS WHEN IT WAS CUT OR COPIED. THEREFORE, FOR PRECISE ALIGNMENT, IT IS RECOMMENDED THAT YOU INCREASE THE MAGNIFICATION LEVEL.*

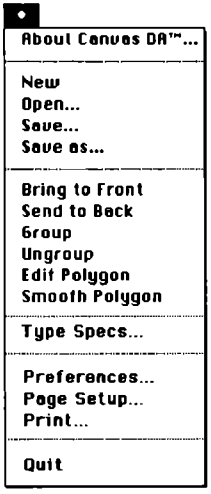
Clear

The ***Clear*** command will remove any selected object, groups of objects or selected area from your illustration, but it will not save it to the Clipboard.

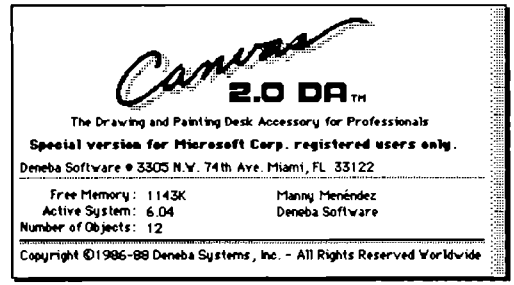
USER TIP *YOU CAN ALSO CLEAR A SELECTION FROM YOUR ILLUSTRATION BY PRESSING THE DELETE OR BACKSPACE KEYS.*

USER TIP *THE CANVAS 2.0 DA HAS NO CONTROL OVER THE STATE OF THE EDIT MENU. SOME APPLICATIONS DO NOT INCLUDE A "CLEAR" COMMAND IN THE EDIT MENU IF THERE IS NO "CLEAR" COMMAND IN THE EDIT MENU YOU WILL HAVE TO USE THE DELETE OR BACKSPACE KEYS TO "CLEAR."*

The Canvas DA Menu



The Canvas DA menu lists commands that pertain to your entire illustration. From this menu you can create a new illustration, open, save, or print an existing illustration; you can save changes to an illustration, change the page setup for printing or print your entire graphic. You can modify your preferences files, edit polygons, group and ungroup objects, bring objects to the front or send them to the back of an illustration, or quit.


Canvas 2.0 DA™
The Drawing and Painting Desk Accessory for Professionals
Special version for Microsoft Corp. registered users only.
Deneba Software • 3305 N.W. 74th Ave. Miami, FL 33122
Free Memory: 1143K
Active System: 6.04
Number of Objects: 12
Manny Menéndez
Deneba Software
Copyright ©1986-88 Deneba Systems, Inc. - All Rights Reserved Worldwide

About Canvas DA™...

The *About Canvas 2.0 DA™...* option opens the screen shown above.

New ⌘N

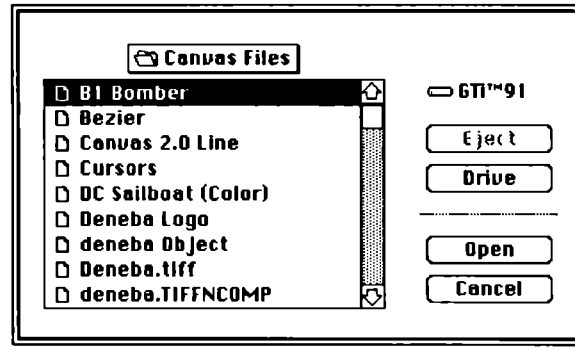
New opens a new untitled document from the Canvas desktop or any illustration window. This document will be created from the *Canvas Prefs* file. Canvas allows you to have as many illustrations open at one time as the memory of your computer will allow.

Open ⌘O

Open allows you to open an existing illustration that was created by Canvas or MacPaint and MacDraw, or any illustration that was saved as a PICT, PICT2 or TIFF document.

File Type
Canvas, PICT, PICT2 or TIFF formats
File Name
Default is "Untitled" for new document

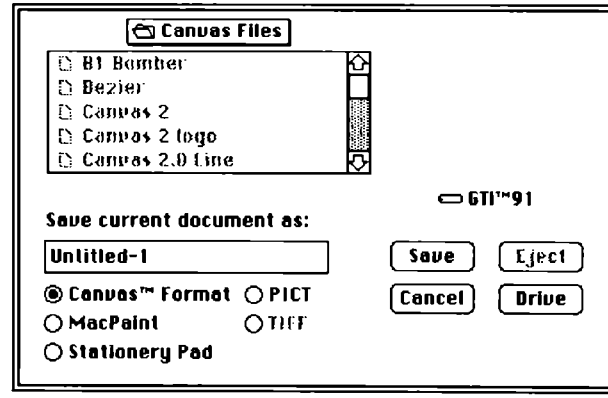
When the *Open* command is selected, Canvas displays a standard dialog listing all of the files Canvas can open on the current disk or in the current folder.



Scroll through the list of files until you find the one that you want to open, then either click on its name and then click on the "Open " button or double click on the file name. Use the "Drive" and Eject" buttons as needed to access folders or files on other disks.

Save As...

Canvas will ask you to name the document before saving. Also, if you want to save the changes to your original illustration under a different name or file format, you will want to use the *Save as...* command.



Bring to Front ⌘F

Send to Back ⌘J

Objects in Canvas can overlap, much like the windows on your Macintosh. Whenever you draw a new object, it is placed on top of all other objects in that layer of your document. By arranging objects on top of each other, you can combine many simple objects to produce extremely complex illustrations. The ***Bring to Front*** and ***Send to Back*** commands are used to rearrange the stacking order of objects in an illustration.

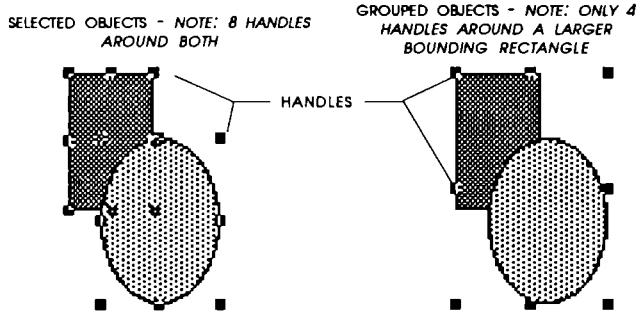
Group ⌘G

Sometimes you will want to consider a group of related objects as a single object. The ***Group*** (⌘-G) command, from the menu, allows you to do this. Once grouped, selecting one member of the "group" selects them all.

The ability to define new *classes of objects*, by combining many basic shapes, is one of the most powerful features of Canvas. For example, two squares and a few lines can become a three dimensional cube, different lines and combinations of freehand shapes or polygons, can become plants or hedges for an architectural rendering. You can then duplicate these new shapes with a single command.

To group objects together:

- select all the objects you want to group, then
- choose ***Group*** from the menu. All the objects are now "grouped" and *selected*. Notice that all the individual handles have disappeared and have been replaced by a new set of handles surrounding the entire group.


SELECTED OBJECTS - NOTE: 8 HANDLES AROUND BOTH
GROUPED OBJECTS - NOTE: ONLY 4 HANDLES AROUND A LARGER BOUNDING RECTANGLE
HANDLES

Ungroup ⌘U

You can separate "grouped" objects by using the *Ungroup* (⌘-U) command. To do this:

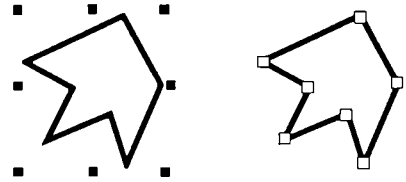
- select the group and choose *Ungroup* objects from the menu. The grouped objects will revert to being individual objects with their own set of selection handles.

Edit Polygon ⌘E

The *Edit Polygon* (⌘-E) selection from the menu lets you reshape an existing polygon, freeform object or Bezier Curve.

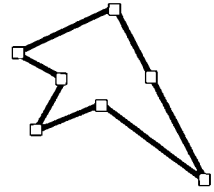
To edit a polygon:

- select the polygon to edit with the *Arrow* cursor



- choose *Edit Polygon* (⌘-E) from the menu. This command changes the way in which the selected object is highlighted. Instead of showing handles around the polygon's *bounding rectangle,* the polygon is shown with a handle at each point or *vertex.*

- drag these handles individually to reshape the polygon.



Adding Polygon Points

If you drag one of the handles while holding down the *Option* key, a new handle and point (*vertex*) will be created. The old handle will remain in place, and a new one will be inserted between the original and the next vertex in sequence. You can drag this handle to add more definition points to the object. This is especially useful when used in combination with the smoothing option to add detail and control to the appearance of complex polygons or Bezier Curves.

USER TIP *IF THE POLYGON IS "CLOSED," YOU CAN ALSO HOLD THE ⌘ KEY AS YOU CLICK ON A POINT (VERTEX) AND CANVAS WILL "OPEN" THE POLYGON AND ADD ANOTHER POINT (VERTEX). CONVERSELY, IF THE POLYGON IS "OPEN," HOLD THE ⌘ KEY AS YOU CLICK ON ONE OF THE END POINTS AND CANVAS WILL "CLOSE" THE POLYGON BY JOINING THE TWO END POINTS.*

Removing Polygon Points

You can also remove a polygon edit point or *vertex* by simply holding down the *Shift* and *Option* keys while clicking on the vertex to be removed. Clicking anywhere outside the polygon removes the vertex handles and fills the polygon with its original pattern.

Smooth Polygon

The ***Smooth Polygon*** command is used to round the corners of a polygon or freeform shape. The resulting shape is a smooth curve based on the original polygon. This is very significant because it means that any complex curve can be precisely defined using the vertices, or control points, of a polygonal object. To ***Smooth*** a polygon: select the polygon to smooth by clicking on it; then, choose ***Smooth Polygon*** from the menu. A smooth curve will be fitted to the selected polygon.

Smooth Polygon

The ***Smooth Polygon*** command is used to round the corners of a polygon or freeform shape. The resulting shape is a smooth curve based on the original polygon. This is very significant because it means that any complex curve can be precisely defined using the vertices, or control points, of a polygonal object. To ***Smooth*** a polygon: select the polygon to smooth by clicking on it; then, choose ***Smooth Polygon*** from the menu. A smooth curve will be fitted to the selected polygon.

Type... ⌘T

The ***Type...*** option displays a dialog that combines all type specification options available, into one selection dialog box.

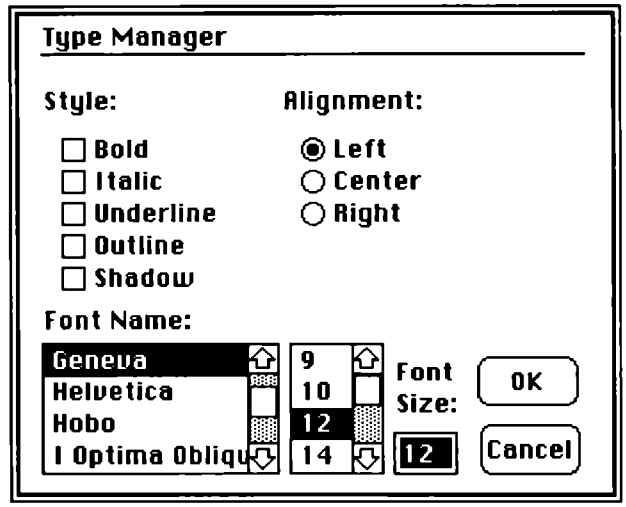
Style Selections
Click on any one or combination of styles for the highlighted text in a text object

Text Justification
Choose one justification mode for a text object

Font Names
List all the fonts installed in your System which are available for your text object - scroll through the list and click the mouse on the name of the font you wish to use

Predefined Point Size Window
Allows you to scroll through a list of font sizes - click the mouse on your size choice to select it

Custom Point Size Window
Type in any point size up to 127 points for any text in your text objec

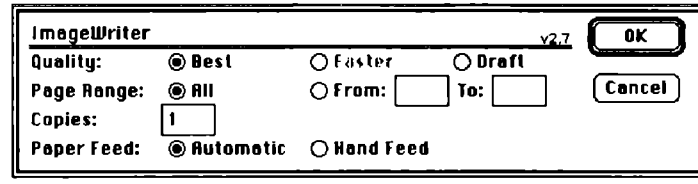


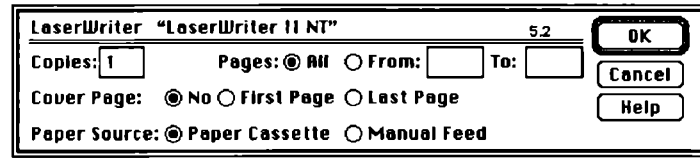
Page Setup

Page setup allows you to customize the print functions of Canvas 2.0 DA. As with most Macintosh programs, Canvas allows you to define the paper size and orientation. The options you choose here can affect the rulers, page breaks and drawing size dimensions. All settings apply only to the active (topmost) illustration. Whenever you save an illustration, all settings are saved with the document. The option settings for Page Setup vary depending upon whether you are using an ImageWriter, a QuickDraw printer (such as the Apple LaserWriter II SC or General Computer's PLP) or a Post-Script laser printer. Canvas automatically recognizes your printer and only displays the appropriate dialog boxes.

Print ⌘P

This command prints the active (topmost) document to the selected printer. Choosing ***Print*** will display one of the following dialogs, depending on the printer currently selected. A number of printing options can be selected using either one of these dialogs.

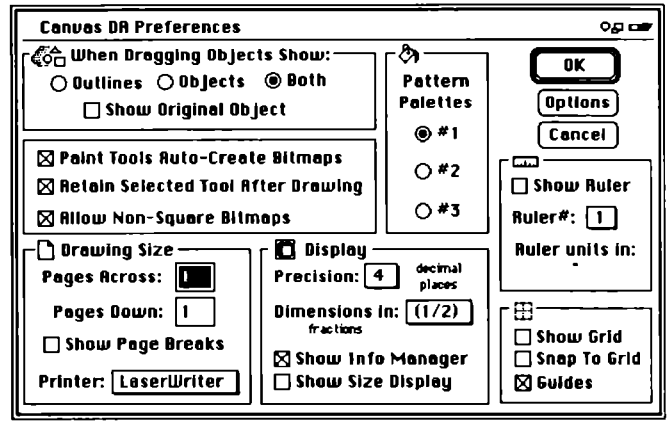




Preferences

While Canvas gives you the ability to create custom illustrations, it also gives you the ability to customize your working environment. To customize the *Preferences* dialog shown below:

- **Click the *Outlines* button to only display an outline of the object while it is being dragged; click the *Objects* button to display the actual object while it is being dragged; or, click the *Both* button if you want**



to display an outline of the object during a *fast drag*, or the actual object if you click and then pause before dragging. Click the *Show Original Object* button to leave a copy of the original object in-place while the object is being dragged. When the mouse button is released, the copy of the original in-place object will disappear.

- **By clicking the *"Paint Tools Auto-Create Bitmaps,"* Canvas will automatically allow you to create a paint (*bitmap*) object whenever a *Paint Tool* is selected**

from the *Tool Box* and the tool is positioned inside the *Canvas Window*. If this option is not selected, in order to create a paint (*bitmap*) object, you must first define a *bitmap area* with the *Bitmap Editor* tool in the *Tool Box*. Click the *Retain Selected Tool After Drawing* button if you do not want Canvas to revert back to the *Arrow* cursor. The *Allow Non-Square Bitmaps* button, if checked, permits irregular shaped bitmap objects in your illustration.

- Type a value from 1 to 9 in pages across or pages down to specify the drawing size.
- Click on *"Show Page Breaks"* if you want Canvas to display the page breaks.
- Type a value from 1 to 4 in the *Display Precision* window to define the number of decimal places Canvas displays all dimensioning data in.
- Under *"Dimensions in:"* select fractions if you want the *Information Manager* to display in fractions. Select decimals if you wish it to display in decimals.
- Select "*Show Info Manager* " if you want Canvas to display *Auto Dimensioning Data*. See page 6 for more information on this feature.
- Select *"Show Size Display"* if you wish Canvas to display the dimensions of an object, alongside it as it is being drawn.
- Select which pattern palette you want Canvas to display.
- The *"Show Rulers"* option tells Canvas to display or hide rulers in your illustration.

To "Peel-Away" rulers in an illustration: enable *Show Rulers* in the *Preferences*. Position the cursor on the ruler you wish to "Peel-Away." Press and hold the Option Key and mouse button. Drag the ruler to the desired location. To remove a "Peel-Away" ruler: click the mouse on the ruler and press the delete key.

- **Select *"Show Grid,"* if you want Canvas to display the alignment grid that corresponds to the currently selected ruler. If you activate the *"Snap to Grid"* option, it enables an invisible alignment grid that permits the alignment of objects with precision.**

When *"Snap to Grid"* is enabled, dragging or sizing an object or group of objects causes it to *"Snap"* to the nearest grid line.

- ***"Guides"* are lines used to help you align objects. While visible on the screen, guides will not print in your illustration. To display guides in an illustration, enable the *"Guides"* option.**

- **Click the *OK* button to save your changes and close the dialog or *Cancel* if you change your mind.**

Available Rulers:

#1=inches (1/16" divisions): 1"=1"

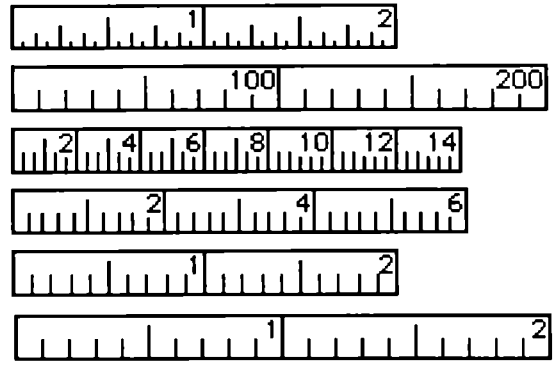
#2=points: 1point=1point

#3=centimeters: 1cm=1cm

#4=picas: 1pica=1pica

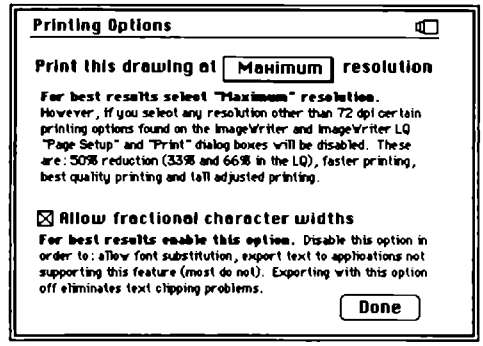
#5=inches (1/10" divisions): 1"=1"

#6=points: 100 points=1 point



Options

The Options button accesses two new options from the **Preferences** dialog. You can set the desired printing resolution, from 72dpi to 300dpi. The default setting is *Maximum*, which takes advantage of the full resolution of your printer. By selecting a lower resolution, you can enable your printer's reduction and faster print options, if any.

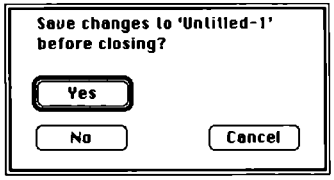

Printing Options
Print this drawing at Maximum resolution
For best results select "Maximum" resolution.
However, if you select any resolution other than 72 dpi certain printing options found on the ImageWriter and ImageWriter LQ "Page Setup" and "Print" dialog boxes will be disabled. These are: 50% reduction (33% and 66% in the LQ), faster printing, best quality printing and tall adjusted printing.
Allow fractional character widths
For best results enable this option. Disable this option in order to: allow font substitution, export text to applications not supporting this feature (most do not). Exporting with this option off eliminates text clipping problems.
Done

The second option is **Allow Fractional Character Widths.** Turning this option ON allows Canvas 2.0 DA to deliver best text output quality. Canvas will access the letter spacing (kerning) information provided in most fonts in order to deliver the best looking text possible. Also, the screen representation will match printed results with a much higher degree of precision.

The drawbacks to allowing fractional character widths are that many older fonts, an even some new ones (most notably Adobe's™), do not contain this font information. With this lack of font information, characters will either overprint or exhibit large gaps (empty spaces) between letters. If this happens, you should turn this option OFF. Another reason to turn this option OFF is to allow font substitution on PostScript™ printers.

Many older programs, including some word processors, do not support fractional character widths. If you are exporting graphics containing text to programs not supporting this feature, you will get better results by turning this feature off.

Quit



Quit will close all open Canvas illustrations and return you to the Finder desktop. If a Canvas illustration is open and you made changes to the document since it was last saved, Canvas will display a "Save changes?" dialog before allowing you to quit.

INDEX

A

 Menu vii
  About Canvas DA 64
adding points to:
  Bezier curves 41
  freeforms 33
  polygons 33
Alignment Tool 51
  multiplex options 52
Alignment Manager dialog 51
anchor points 29
Arc tool 27
arcs:
  drawing 27
arrow:
  keys 11
  options with 18
  Tool 17
Arrow Manager dialog 56

B

Back, Send To command 66
Background Color Manager dialog 54, 55
basic:
  drawing tools 23
  icons 23
Bezier curve:
  adding points to 41
  deleting points 42
  drawing 30, 31
  editing points 39
  moving 44
  multiplex options 29
  opening/closing 43
  Principles Of Drawing 30
  resizing 44
Bezier curve tool 29
bitmaps:
  cropping option 52
  resolution 49
Bitmap Editor Tool 49
bounding rectangle 20
Bring To Front command 66
Brush Shapes, changing 47

C

Canvas Window 2
centimeters, choosing 72
changing:
  bitmap resolution 49
  corners of rounded rectangles 25
  display modes 53
  drawing size 77
  fonts 69
  font size 69
  layers 7
  multiplex options 22, 28, 29, 47, 49, 51, 52
  patterns 54
  pattern palettes 72
  preferences 71
  rulers 73
  stacking order of objects 66
circles 25
Clear command 63
Close command 59
closing:
  Bezier curves 43
  freeforms 35
  polygons 35
Command Keys 11
Copy command 62
Crop Work command 52
cropping bitmaps 52

customizing:
Canvas 71
rulers 73
Cut command 61

D

defaults 8
deleting points from:
freeforms 34
polygons 34
de-selecting:
with the Arrow 20, 21
with the Lasso 20, 21
with the Marquee 20, 21
desktop 2, 3
dragging:
objects 18
peel-away rulers 73
Draw Mode selector 53
drawing:
arcs 27
Bezier curves 29
circles 25
freeforms 28
polygons 29
quarter-circle arcs 27
rectangles 24
rounded corner rectangles 25
rounded corner squares 25
squares 24

E

Edit Menu 60
editing:
Bezier curves 39
freeforms 31
polygons 31
text 22
Edit Polygon command 32
Effects Menu 52
Effects tools 52
Eraser tool 48
error codes B-1

F

File Menu 59
Fill command 52
Fill Pattern Manager 54
filling:
bitmaps 47
Flip Both Axes command 52
Flip Horizontal command 52
Flip Vertical command 52
Font command 69
fonts:
changing 22, 69
justification 22, 69
size 22, 69
style 22, 69
Foreground Color Manager dialog 55
Freeform tool 28
freeforms:
adding cusps 37
adding points 33
closing 35
deleting points 34
drawing 28
editing points 32
moving or resizing 38
smoothing 37

G

grid system:
turn on/off 73
Group command 66
grouping objects 66
Guides command 73

H

Hand tool 16, 50
handles 24
hiding:
  grids 73
  information manager 72
  page breaks 72
  rulers 73
  size display 72
horizontally flipping objects 52
Hump Principle 30

I

icons:
  multiplex 22, 28, 29, 47, 49, 51, 52
inches, choosing 73
Information Manager:
  displaying data 72
  Show/Hide command 72
Ink Manager dialog 56
installation procedures vi
Invert command 52

J

Justification 69

K

keyboard equivalents 11-13

L

lasso:
  de-selecting areas with 20
  options 19
  using 19
Lasso tool 19
Layer Monitor dialog 7
layers:
  moving between 7
Line tool 23

M

Magnifying Glass tool 50
Marquee:
  De-Selecting Areas 21
  Options 21
  Using 20
Marquee tool 20
Memory & Multifinder *v*
Menu Bar 3
Mode Selectors 53
moving:
  between layers 7
  peel-away rulers 73
Multiplex icons:
  Alignment tool 51
  Bezier curve tool 29
  Bitmap Editor tool 4
  definition 22
  Freeform tool 28
  Information Manager 6
  Paint Brush tool 47
  Polygon tool 29
  Special Effects tool 50
  Spray Can tool 46
  Text tool 22

N

New:
  File command 64

O

objects:
  aligning 51
changing location 102
grouping 66
show size 72
stacking order 66
ungrouping 66
Open command 64

Options 74
Oval tool 25

P

page:
  Breaks, Show/Hide command 72
  Setup command 70
paint brush:
  changing tips 47
Paint Brush tool 47
Paint Bucket tool 47
Paint Mode 53
Paste command 62
patterns:
  changing 72
peel-away rulers 73
pen:
  pattern manager 55
  patterns 72
  shapes 56
Pencil Tool 48
"Pie" charts 26
polygon:
  adding cusps 37
  adding points 33
  closing 35
  deleting points 34
  drawing 29
  edit points 32
  moving 38
  opening 35
  resizing 38
  smoothing 37
Polygon tool 29
Preferences command 71
Prefs file 8
Print 70

Q

Quit 76

R

Rectangle tool 24
Rescue Files 14
Rotate command 52
Rounded-Corner Rectangle Tool 25
rulers:
  choosing 73
  customizing 73
  peel-away 73
  showing 73

S

Save:
  As command 65
Scroll Arrows 5
Scroll Box 5
Scroll Boxes 5
selecting:
  with the Arrow 17
  with the Lasso 19
  with the Marquee 20
selection tools 17
Send To Back command 66
setting drawing size 72
show:
  Grid command 72
  Info Manager command 72
  Page Breaks command 72
  Rulers command 73
Sideboard 5
size:
  Box 5
  drawing 72
  text 69
Snap To Grid command 73
Special Effects Tool 52
Split command:
  Bezier curves 38
  freeform 38

polygon 38
Spray Can tool 46
squares, drawing 24
stacking order:
changing 66
Stationery Pad files 10
stretching objects 18
style, text 22, 69

T

text: 22, 69
multiplex options 22
Text tool 22
The 33% Principle 30
Title Bar 3
Tool Box 8
Tools:
Advanced Drawing 28
Alignment tool (Multiplex) 51
Arc tool 27
Arrow tool 17
Basic Drawing 23
Bezier Curve tool (Multiplex) 29
Eraser tool 48
Freeform tool (Multiplex) 28
Hand tool 50
Lasso tool 19
Line tool 23
Magnifying Glass tool 50
Marquee tool 20
Oval tool 25
Painting 53
Paint Brush tool (Multiplex) 47
Paint Bucket tool 47
Pencil tool 48
Polygon tool (Multiplex) 29
Rectangle tool 24
Rounded-Corner Rectangle tool 25
Special Effects tool (Multiplex) 52
Text tool (Multiplex) 22
transfer modes (Ink Manager) 69
Type Manager dialog 69

U

Undo command 60
Ungroup command 67
Upgrading A-1

V

vertically flipping objects 52
viewing:
layers 7

W, X,Y

window:
Canvas Window 2
opening 64

Z

Zoom Manager 57
zooming:
with the magnifying glass 50

Why should I upgrade to the full Canvas 2.0 stand-alone application?

As powerful as the Canvas 2.0 DA is, there are many reasons why you should upgrade to the Canvas 2.0 stand alone application (see the list below). The best reason to upgrade however, may be our limited time upgrade offer for all Microsoft/Canvas 2.0 DA owners!

Due to limitations in the maximum size of desk accessories, speed and other technical considerations, we were not able to include many important features in the Canvas 2.0 DA™. Some of the more powerful and useful features found only in the Canvas 2.0 program are:

- Unlimited numbers of layers
- A powerful layer manager - it lets you create and delete layers, change the stacking order, make layers visible, invisible, grey and even allows you to assign a color to an entire layer (color override)
- Built-in auto-tracing - automatically converts scanned images (bitmaps) into resolution independent line art (objects)
- Up to 16.7 million colors per drawing instead of just 256
- A sophisticated color editor - RGB, HSV blends, loads and saves color palettes
- Spray Can/Airbrush editor - create your own airbrush nozzles
- Pattern Editor - gives you direct control over all your patterns plus, the ability to load and save any number of pattern palettes.
- Custom pen size manager - pen sizes as thin as 1/1000th of an inch.
- On-line help system.
- Custom arrowhead editor

- Dashed lines and a sophisticated dashed line editor
- Brush shape editor
- Bitmap resolutions from 72 dpi to 2540 dpi
- Additional special effects like: skew or slant, distort, one and two-point perspectives
- Precise scaling manager - resize any object using percentages or ratios
- Object libraries - store an retrieve an unlimited number of predefined objects
- A clipboard window and a window menu
- Drawing size manager - control document size, page overlap and printing order
- A powerful Duplicate Options manager for incredible special effects - let Canvas make any number of duplicates of any selected object or group while rotating, resizing and/or moving each successive copy. Each copy can even have its own color, grey scale or pattern
- Central Object control manager - allows you to change the attributes of any object, convert any object to any other object, dither grey scale or color TIFF or PICT files, change the resolution of bitmaps, and even gives you access to PostScript© language programing using Canvas 2.0
- Importing of MacDraw I files directly without saving to PICT first. This makes it easy to step up to Canvas 2.0 from MacDraw.
- Save and print individual layers or entire illustrations.
- Full justification of text and leading control.
- The Canvas Separator Utility - converts Canvas 2.0 illustrations into several types of Encapsulated Post Script (EPS) and save or print 4-color process (CMYK) separations from any Canvas illustration!
- Includes the latest version of the Canvas 2.0 desk accessory.

- Suggested retail price: $299.95.

Upgrade to the Canvas 2.0 stand-alone program when you send in your registration card and pay only $99.95 (includes shipping and handling) save $200.00!!!

Remember this is a one time only offer. You must upgrade when you send in your registration card. Only valid for Canvas 2.xx. Offer expires March 1, 1990.

APPENDIX A

APPENDIX Error Code Messages

Error Code 26

Resource or driver not found. A vital part of the program did not copy correctly and could not be found. Re-install directly from your master disk and try again. If the missing part belongs to the System re-install your System file instead.

Error Code 33

Disk or disk directory full! Try saving your document to a different disk with more space available. Remember, if you close the document now without saving your work all changes will be permanently lost!

Error Code 34

Disk or disk directory full! Try saving your document to a different disk with more space available. Remember, if you close the document now without saving your work all changes will be permanently lost!

Error Code 36

Disk I/O error. Usually this error indicates some kind of hardware problem, either bad disk media (wear) or a defective disk drive.

Error Code 39

Logical end-of-file reached during a read operation. Something went wrong the last time this document was saved or the disk is defective (possibly wear).

Error Code 44

File locked. You can't write to a file that has been locked using the Finder's Get Info option, or to one that belongs to a locked disk, volume or folder.

Error Code 45

File locked. You can't write to a file that has been locked using the Finder's Get Info option, or to one that belongs to a locked disk, volume or folder.

Error Code 46

File locked. You can't write to a file that has been locked using the Finder's Get Info option, or to one that belongs to a locked disk, volume or folder.

Error Code 47

File busy. This file is currently being used by someone else on the network. Otherwise it has been left open as a result of a System Error (if this is the case restart your computer as soon as possible).

Error Code 49

File busy. This file is currently being used by someone else on the network. Otherwise it has been left open as a result of a System Error (if this is the case restart your computer as soon as possible).

Error Code 101

Wrong TIFF file version. Try re-saving the TIFF file with a newer version of your TIFF software.

Error Code 102

There is not enough memory to dither the TIFF object. Try holding down the Option key while opening the file.

Error Code 103

Canvas 2.0 DA does not support the compression type for this TIFF file. Re-save it using no compression.

Error Code 104

Canvas 2.0 DA only supports TIFF files which contain grey level images of 1, 4, 6, or 8 bits.

Error Code 105

There is not enough information in this TIFF file for Canvas 2.0 DA to properly interpret the image. Try resav ing it.

Error Code 108

You are out of memory! Try working with a smaller document, close all unnecessary open desk accessories or windows, reduce your disk cache (Control Panel), disable unnecessary INITs and print spoolers, or get more memory.

Error Code 109

The Macintosh memory manager has encountered a rare but potentially dangerous error. Quit the application and restart your Macintosh as soon as possible.

APPENDIX Error Code Messages

Error Code 111

The Macintosh memory manager has encountered a rare but potentially dangerous error. Quit the application and restart your Macintosh as soon as possible.

Error Code 112

The Macintosh memory manager has encountered a rare but potentially dangerous error. Quit the application and restart your Macintosh as soon as possible.

Error Code 192

Resource or driver not found. A vital part of the program did not copy correctly and could not be found. Re-install directly from your master disk and try again. If the missing part belongs to the System re-install your System file instead.

Error Code 193

Resource file not found. A needed file seems to be missing or can't be found. Double check your User Manual for proper installation instructions.

Error Code 200

Canvas 2.0 DA has encountered a problem reading the program file. Re-copy Canvas 2.0 DA from your original Master Disk.

Error Code 201

Most probable cause is that your Macintosh is out of memory. If you are importing a PICT file it is possible the file may be corrupted.

Error Code 4097

The connection with the printer was just closed. Check all connections to the printer.

Error Code 4099

Write request too big. The printer's memory capacity has been exceeded. Try reducing the size of any large bitmaps and try again.

Error Code 4100

The connection with the printer was just closed. Check all

connections to the printer.

Error Code 4101

Printer not found or closed. Check all connections to the printer, re-select the printer using the Chooser desk accessory. If this fails try restarting the printer.

Deneba Software, 3305 N.W. 74th Avenue
Miami, Florida 33122, 1-800-6CANVAS
© 1988 Deneba Systems, Inc.

08219